

Studies of the genus *Anthelephila* Hope (Coleoptera: Anthicidae) – 10. Species related to *A. imperatrix*

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Studies of the genus *Anthelephila* Hope (Coleoptera: Anthicidae) – 10. Species related to *A. imperatrix*. - *Anthelephila imperatrix* LaFerté-Sénéctère, 1849, *A. subtruncata* (Pic, 1899) and male characters of *A. besucheti* Bonadona, 1989, *A. congoana* Uhmman, 1981 and *A. ovipennis* (Bonadona, 1984) are redescribed. Eight new species are described: *A. cardamontis* sp. n. (India), *A. curvitaris* sp. nov. (South Africa), *A. aratrix* sp. n. (India), *A. irula* sp. n. (India), *A. kresli* sp. n. (Nepal), *A. lobulicula* sp. n. (Nepal), *A. sculpta* sp. n. (India, Bhutan) and *A. vanhillei* sp. n. (South Africa). New synonymy, *A. imperatrix* LaFerté-Sénéctère, 1849 (= *Formicomus punctaticeps* Pic, 1916 syn. n.), is proposed. Status of *F. cribriceps* Marseul, 1876 is discussed and its previous placement in synonymy with *A. imperatrix* LaFerté-Sénéctère, 1849 is supported.

Keywords: Coleoptera - Anthicidae - *Anthelephila* - systematics - new species - new synonymy.

INTRODUCTION

An informal *A. imperatrix* species-group is here established for five known and eight newly described species of the genus *Anthelephila* Hope, 1833. Apart from their prevailing aptery and simple forelegs of the males, the included species are distinguished by possession of the simpler structure of male abdominal segment VIII, nearly straight lateral mesosternal margins, and the paired incisions on the posterior, exposed margin of the prosternum. All of these characters occur rarely within the genus, and some of them suggest, along with the discontinuous ranges, a rather basal position of this species-group, and also a closer relationship of *Anthelephila* to *Stenidius* LaFerté-Sénéctère, 1847.

ABBREVIATIONS AND EXPLANATIONS

The following abbreviations of collections are used (in round brackets):

ADBC collection Augusto Degiovanni, Bubano, Italy

AMGS Albany Museum, Grahamstown, South Africa

BMNH The Natural History Museum, London, England

- DCDC collection Donald S. Chandler, Durham, New Hampshire, U. S. A.
 GUPC collection Gerhard Uhmann, Pressath, Germany
 HNHM Hungarian Natural History Museum, Budapest, Hungaria
 MHNG Muséum d'histoire naturelle, Genève, Switzerland
 MNHB Museum für Naturkunde der Humboldt Universität, Berlin, Germany
 MNHN Muséum National d'Histoire Naturelle, Paris, France
 NHMB Naturhistorisches Museum, Basel, Switzerland
 NHMW Naturhistorisches Museum, Wien, Austria
 NKME Naturkundemuseum Erfurt, Erfurt, Germany
 NMPC National Museum, Prague, Czech Republic
 SANC S. A. National Collection of Insects, ARC – Plant Protection Research Institute, Pretoria, South Africa
 SMF Senckenberg-Museum, Frankfurt am Main, Germany
 SMNS Staatliches Museum für Naturkunde, Stuttgart, Germany
 TMP Transvaal Museum, Pretoria, South Africa
 ZILS Universitets Zoologiska Institut, Lund, Sweden
 ZKDC collection Zbyněk Kejval, Domažlice, Czech Republic

The author's comments on the type material are placed in square brackets: [p] = printed, [h] = handwritten. Exact label data are quoted only for the type specimens. Separate labels are indicated by back slashes (\). The terminology of body setation follows Werner & Chandler (1995).

SYSTEMATICS

Anthelephila imperatrix species-group

DIAGNOSIS: Small to medium sized (2.6-4.6 mm), almost exclusively apterous species, very rarely with fully developed metathoracic wings (only six specimens of *A. imperatrix* and *A. kresli* sp. n.); posterior margin of prosternum with a pair of incisions (Fig. 7, best observed after removing the coxae); elytra ovoid, often rather strongly convex and subtruncate/truncate apically, with obsolete humeri and lacking postscutellar impression (characters related to aptery); forelegs in males simple; meso- and metatibiae often modified (six species); lateral margins of mesosternum nearly straight (Fig. 35); tergum VII lacking paired spinulose patches on dorsal side (a character possibly related to aptery, patches may be used in folding of metathoracic wings); male sternite VIII less differentiated, median sclerite indistinct and paired prongs more or less tightly joined medially, latero-basal plates inconspicuous; male tergite VIII forming single sclerite; tegmen trilobed apically; median lobe of aedeagus terminating in a pair of narrow projections (Fig. 15). Species included: *A. aratrix* sp. n., *A. besucheti*, *A. cardamontis* sp. n., *A. curvitaris* sp. n., *A. congoana*, *A. imperatrix*, *A. irula* sp. n., *A. kresli* sp. n., *A. lobulicula* sp. n., *A. ovipennis*, *A. sculpta* sp. n., *A. subtruncata* and *A. vanhillei* sp. n.

DISTRIBUTION: One Asian species, *A. imperatrix*, exhibits a wide distributional range. All other species are known from limited regions in the following countries: South Africa (3); Zaire, Uganda and Kenya (2); south-western India and Sri Lanka (3); north-eastern India and Nepal (4).

COMMENTS: It should be emphasized, that *A. imperatrix* species-group is established as an informal group of convenience. Its polyphyletic origin is not excluded, as the following important character states appears to be primitive and/or variable within the genus:

Mesosternal margins: In *Anthelephila* the lateral mesosternal margins are typically moderately arcuate in their posterior half (see figs 1, 6 by Kejval, 2003). Straight margins, exhibited by members of *A. imperatrix* species-group, occur in more primitive Anthicinae and they are considered to be the ancestral state (Chandler, 1982). However, the form/width of lateral arms of mesosternum shows variation and some *Anthelephila* species appears to be intermediate in this character.

Abdominal segment VIII: The modified male segment VIII is regarded as a synapomorphy for the genera of Formicomini Bonadonna, 1875 (Kejval, 2003), and species of *Anthelephila* are characterized almost exclusively by the more complicated structure of this segment (sternite VIII differentiated into five separable parts, tergite VIII composed of two sclerites). Consequently, the rather simple structure of segment VIII in the *A. imperatrix* species-group represents either a more primitive condition within the genus, or a derived form characterized by simplification.

Prosternal incisions: In all *Anthelephila* the portion of the prosternum beneath the coxae is sclerotized and extended posteriorly as a distinct sclerite. The posterior margin of this sclerite is typically simple and shallowly emarginate (see Fig. 6 by Kejval, 2003), very rarely with a pair of incisions (Fig. 7). The phylogenetic significance of these prosternal incisions is not clear. Moreover, this character is not restricted to the *A. imperatrix* species-group. Showing clear variation in prominence, it occurs also in *A. kanheri* Kejval, 2002 and several related species inhabiting the region of Western Ghat on the Indian subcontinent, which are rather typical *Anthelephila* with well-developed metathoracic wings, more complicated structure of segment VIII and modified forelegs in males. Other Indian species, more widely distributed and showing similarities in male characters to this small group, lack prosternal incisions completely.

Remarkably, the related genus *Stenidius* resembles species of *A. imperatrix* group in having a less complicated structure of the modified abdominal segment VIII, and its species often display similar prosternal incisions.

A KEY TO SPECIES OF *A. IMPERATRIX* SPECIES-GROUP

- 1(4) Dorsal outline of pronotum rather strongly convex in anterior two thirds, impressed and then distinctly bulging before base in lateral view (Fig. 6); anterior portion of pronotal disc with conspicuous median longitudinal impression/groove.
- 2(3) Ordinary punctuation and setation of elytra very sparse, scattered; posterior band of contiguous punctures and thicker whitish setae directed postero-mediad from lateral margins (Fig. 8); male sternum VII with conspicuous postero-median process (Fig. 10) *A. aratrix* sp. n.
- 3(2) Ordinary punctuation and setation of elytra somewhat denser; posterior band of contiguous punctures and thicker whitish setae directed antero-mediad from lateral margins (Fig. 2); male sternum VII modified, but lacking any postero-median process *A. imperatrix* LaFerté-Sénéctère

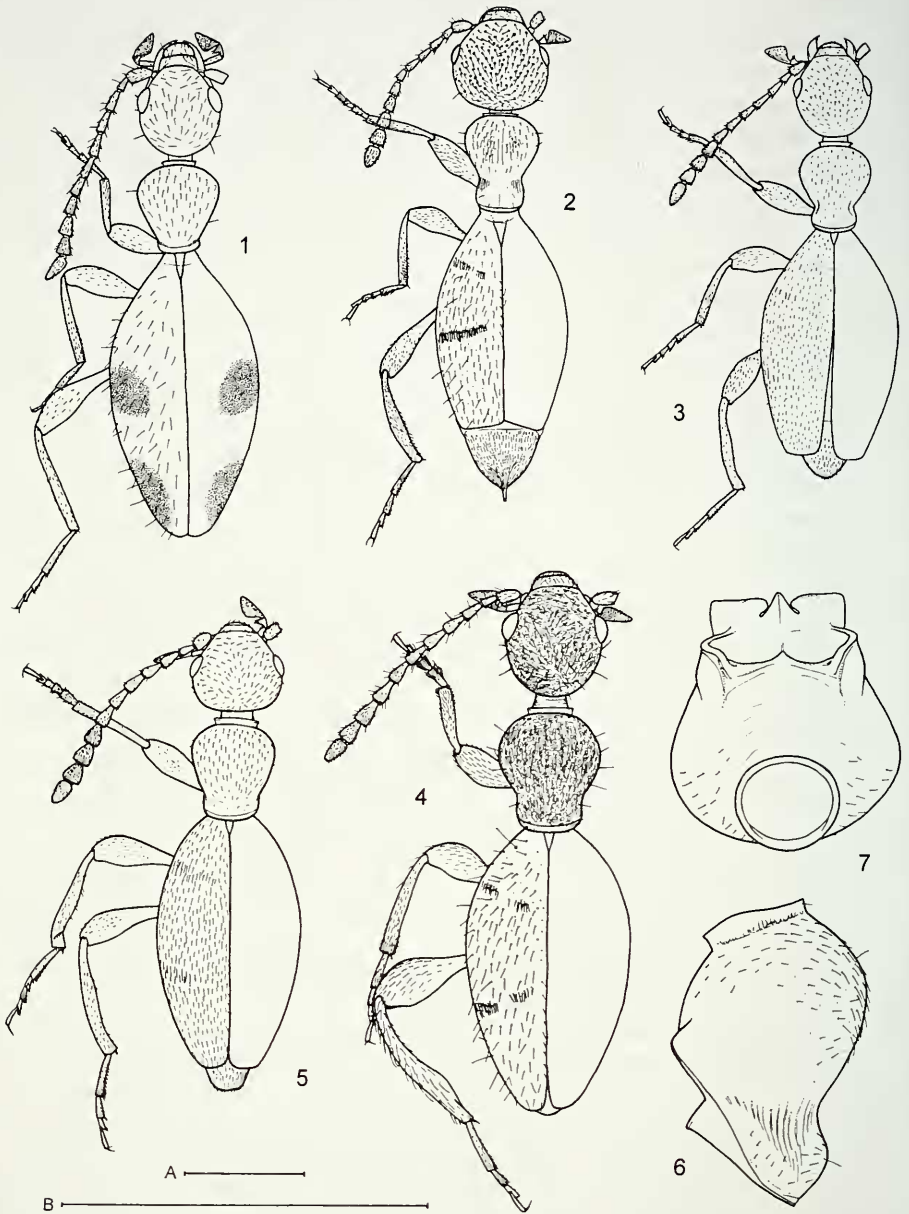
- 4(1) Entire dorsal outline of pronotum more or less convex in lateral view; pronotal disc rather evenly shaped, median longitudinal impression absent or at most moderately indicated and inconspicuous.
- 5(10) Elytra rather sparsely and evenly punctured and setose, lacking any bands/patches of more densely spaced punctures and contrasting whitish setae, their setation pale, longer, with conspicuous erect setae; male metasternum simple.
- 6(7) Elytra rufous, with paired dark spots at about midlength laterally and subapically (Fig. 1); surface of head and pronotum almost entirely smooth (excepting fine wrinkles in postero-lateral impressions of pronotum), finely punctured and very glossy *A. cardamontis* sp. n.
- 7(6) Elytra largely dark coloured, at most with paler base and suture; surface of head and/or pronotum coarsely corrugated, more distinctly punctured.
- 8(9) Dorsal corrugation of head obsolete, punctuation distinct; lateral margin of elytra moderately convex subapically, elytral apices rounded; male character as in Figs 22-25 *A. irula* sp. n.
- 9(8) Dorsal corrugation of head conspicuous, punctuation concealed by corrugation and thus less distinct; lateral margin of elytra slightly concave subapically, elytral apices rather pointed; male characters as in Figs 16-18 *A. besucheti* Bonadona
- 10(5) Elytra unevenly punctured and setose, except ordinary punctures/setae with two, paired, transverse to oblique bands/patches of denser, mostly contiguous punctures and thicker whitish setae, if punctuation nearly evenly sparse and setose bands/patches vaguely indicated (sparse) to indistinct, then setation of elytra uniformly short and inconspicuous, lacking longer, more raised setae; male metasternum with a pair of protrusions posteriorly, bordering laterally more or less prominent postero-medial impression.
- 11(20) Dorsal punctuation of head distinct but comparatively fine and sparse; setation generally short and inconspicuous, whitish setose bands/patches sparser, vaguely indicated to indistinct; Afrotropical species.
- 12(15) Species nearly uniformly dark in colour, including legs and antennae, at most basal 2-3 antennomeres slightly paler; head somewhat widely rounded posteriorly in dorsal view; basal protarsomere in males rather short and narrow.
- 13(14) Pronotum wider, less narrowed and constricted posteriorly in dorsal view, its postero-lateral impressions rather shallow and situated close before base; male middle legs uniformly short setose, mesofemora simple, mesotibiae subapically strongly excavated on inner side (Figs 75, 76); metatibiae rather simple apically; other male characters as in Figs 77-79 *A. vanhillei* sp. n.
- 14(13) Pronotum more narrowed and constricted posteriorly in dorsal view, its postero-lateral impressions deeper and more distant from base; male middle legs with long setae on inner side (Fig. 71), mesofemora slightly produced on inner side distally, mesotibiae simple; inner apical margin

- of metatibiae projecting into blunt process (Fig. 69); other male characters as in Figs 70, 72-74 *A. subtruncata* (Pic)
- 15(12) Species with dark body and distinctly paler legs, antennae and palpi (at least partly); head posteriorly circular to oval in dorsal view; basal protarsomere in males enlarged, conspicuously long.
- 16(17) Postero-lateral impressions of pronotum conspicuous, more distant from base and thus pronotum clearly constricted in posterior half in dorsal view (Fig. 3); whitish setose bands/patches of elytra indistinct, at most slightly indicated; basal protarsomere in males narrow, curved (Fig. 39); other male characters as in Figs 38, 40-43 *A. curvitaris* sp. n.
- 17(16) Postero-lateral impressions of pronotum somewhat less conspicuous, situated near base; whitish setose bands/patches rather sparse but distinct, especially posterior one; basal protarsomere in males wider, straight.
- 18(19) Base of head somewhat unevenly rounded, slightly produced medially; male metatibiae uniformly, sparsely setose; male characters as in Figs 26-29; female tergum VII triangular, strongly narrowed, bluntly pointed apically (Fig. 34) *A. congoana* Uhmann
- 19(18) Base of head rather evenly rounded; male metatibiae subapically with small patch of brownish, short and dense setae on inner side (Fig. 36); other male characters as in Figs 30-33; female tergum VII subtriangular, moderately narrowed, rather rounded apically (Fig. 37) *A. ovipennis* (Bonadona)
- 20(11) Dorsal punctation of head coarse and rather dense, punctures separated by about their diameter; setation much longer and more raised, whitish setose bands/patches dense, conspicuous; Oriental/Palaearctic species.
- 21(22) Pronotum distinctly narrower than head including eyes; punctation of head and pronotum clearly different, punctures of pronotum, especially the postero-dorsal and lateral ones, much finer than those of head; male characters as in Figs 58-61, 63 *A. lobulicula* sp. n.
- 22(21) Pronotum at most slightly narrower than head including eyes; punctation of head and pronotum nearly identical.
- 23(24) Surface of head and pronotum less glossy, very coarsely and rather evenly sculptured, punctures situated in nearly contiguous, rather deep, pit-like impressions; male characters as in Figs 64-68 *A. sculpta* sp. n.
- 24(23) Surface of head and pronotum normally, coarsely and somewhat unevenly punctured, with interspaces smooth and glossy; male characters as in Figs 54-57, 62 *A. kresli* sp. n.

Anthelephila aratrix sp. n.

Figs 8-15

TYPE MATERIAL: Holotype ♂, INDIA W. Bengal Darjeeling dist. Algarah 1800 m 9-X-78 Besuchet Löbl \ *Anthelephilus* *imperator* (Laferté) det. G. Uhmann 1986 (MHNG). – Paratypes: 1 ♂, 1 ♀, same data as holotype (ZKDC, MHNG). – 1 ♀, same data as holotype, except: 250 m [see Remarks] (MHNG). – 1 ♂, Darjeeling Distr India Bhakta B. \ Gorco Bethan 840m 21.IV.1979 \ *Anthelephila* *imperator* (LaF.) det. D. Telnov, 2000 (NHMB). – 1 ♂, Darjeeling Distr India Bhakta B. \ Chuba 670m, 11.IV.1979 \ *Anthelephila* *imperator* LaF. det. D. Telnov,



FIGS 1-7

Habitus of *Anthelephila*: (1) *A. cardamontis* sp. n., male. (2) *A. imperatrix* LaFerté-Sénéctère, female. (3) *A. curvitaris* sp. n., male. (4) *A. sculpta* sp. n., male. (5) *A. vanhillei* sp. n., male. *A. imperatrix* LaFerté-Sénéctère: (6) pronotum, lateral view. (7) pronotum, antero-ventral view. Scale (1 mm): A – Figs 1-5, B – Figs 6, 7.

1999 (ZKDC). – 1 ♀, Darjeeling Distr India Bhakta B. \ Monshong 1350m 23.XI. \ *Anthelephila imperator* (LaF.) det. D. Telnov, 2000 (NHMB). – 1 ♀, Indien Darjeeling D Ch. J. Rai \ Kalimp. 800m Upper Janake 17.IV.1987 \ *Anthelephila imperator* LaF. det. D. Telnov, 1999 (NHMB).

ETYMOLOGY: From Latin *arator* (ploughman); named in reference to peculiar, plough-like shaped process of male sternum VII.

DESCRIPTION: Body length 2.9-3.5 mm (holotype 3.3 mm).

MALE (holotype): Identical with *A. imperatrix*, except for the following characters: antennae somewhat more slender in distal third; ordinary setation of elytra sparser, posterior band of contiguous punctures and thicker whitish setae directing from lateral margin postero-mediad (Fig. 8); procoxae angulately produced, punctation of metafemora somewhat finer and less conspicuous. Sternum VII (Figs 9, 10) emarginate posteriorly and projecting ventrad into peculiar, conspicuously large median process, apical portion of this process abruptly curved posteriad, and strongly widened, trapezoidal in ventral view, and with small denticle on each side latero-basally. Tergum VII (Fig. 11) truncate posteriorly, its posterior margin moderately sinuous. Sternite VIII (Figs 12, 13); paired prongs robust, rather simple, arcuately curved ventrad in lateral view, their dorso-median margin dilated mediad at about midlength into small, rounded process; setation of prongs inconspicuous, short, fine and scattered. Tergite VIII (Fig. 12) nearly parallel-sided in dorsal view, truncate posteriorly, with rounded postero-lateral angles, finely and shortly setose. Aedeagus (Figs 14, 15); apical portion of tegmen 0.8 times as long as basal-piece, trilobed apically, middle lobe conspicuously wide, strongly and nearly evenly narrowing towards pointed apex, slightly longer than apically rounded, lateral lobes; apical paired projections of median lobe of aedeagus flattened, angulately dilated laterad and ventrad subapically, rounded apically.

FEMALE: Externally identical with male, except as follows: procoxae simple; sternum VII simple, evenly rounded posteriorly; tergum VII triangular, narrowed and rounded apically, its apical portion rather strongly vaulted, but evenly shaped, lacking a median edge or protrusion.

VARIABILITY: Inconspicuous.

DIFFERENTIAL DIAGNOSIS: *A. aratrix* sp. n. is habitually very similar and undoubtedly closely related to *A. imperatrix*, but differs substantially in most male characters; see the above description and the key.

DISTRIBUTION: India (West Bengal).

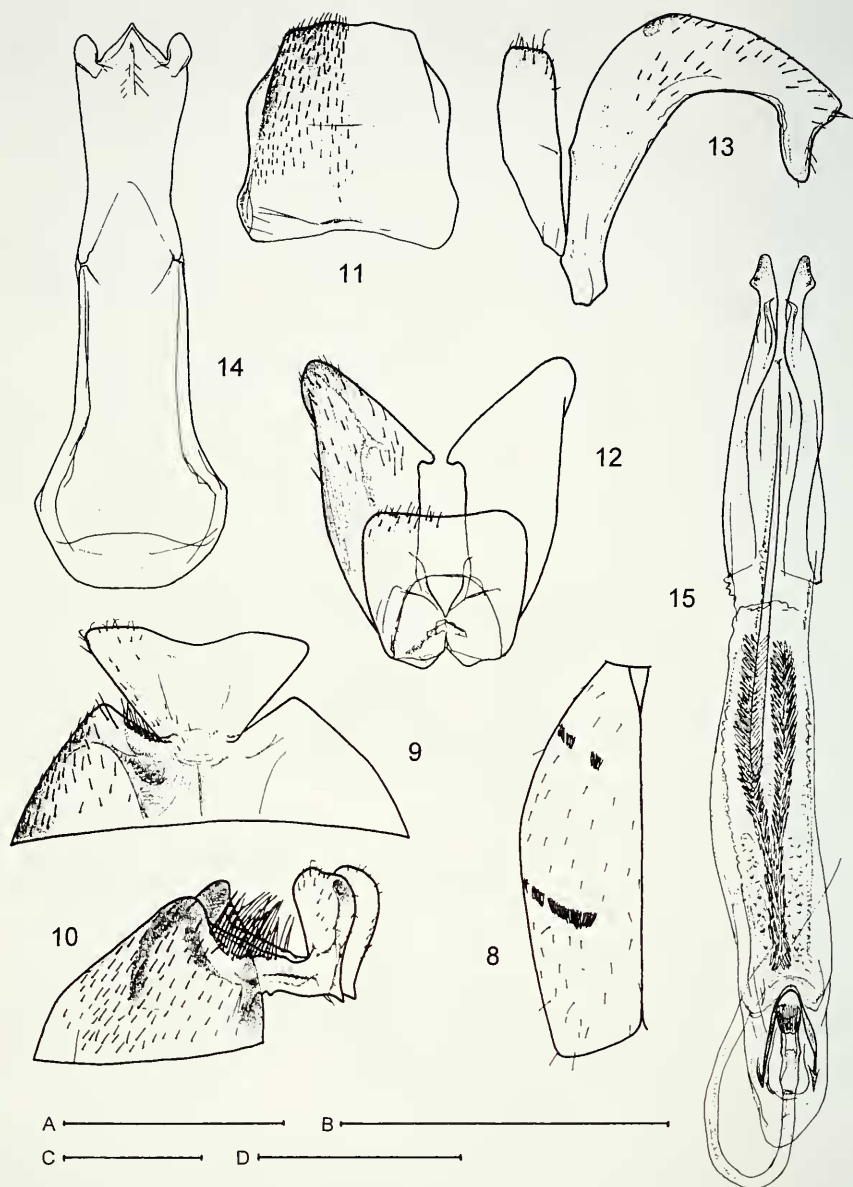
REMARKS: With respect to the identical sample number, handwritten on the other side of label, all the type specimens from Algarah should bear the same locality data; the altitude "250 m" in a paratype from MHNG is definitely a labeling mistake (G. Cuccodoro, pers. comm.)

Anthelephila besucheti Bonadona, 1989

Figs 16-18

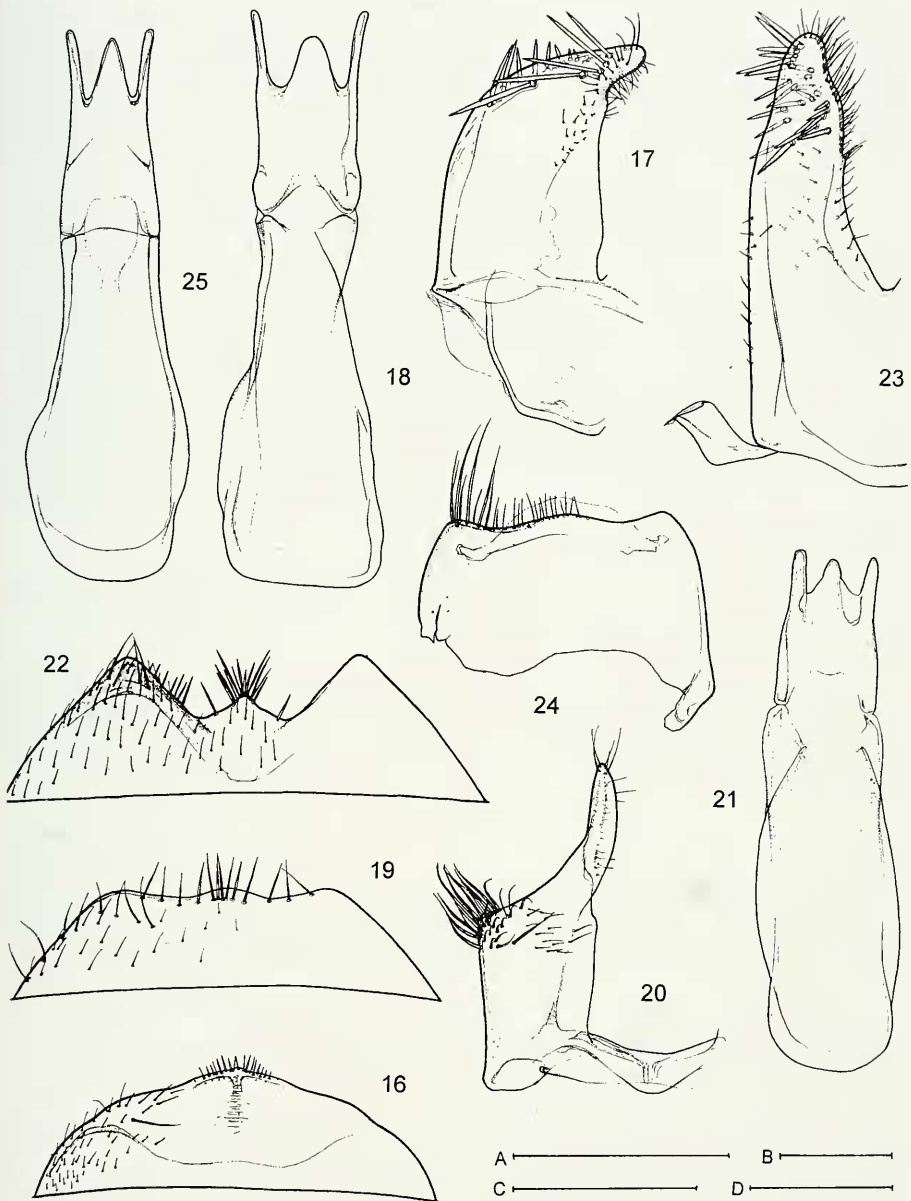
Anthelephilus besucheti Bonadona, 1989: 263, figs 6, 14, 16-18.

TYPE MATERIAL: Holotype ♂, CEYLAN Southern Yala nat. park 24.I.1970 Mussard Besuchet Löbl [p+h] Holotype [p; red label] \ *Anthelephilus besucheti* nsp. P. Bonadona dét. 1976 [p+h] (MHNG). – Paratypes: 1 ♂, 2 ♀♀, same data as holotype (MHNG, 1 ♀ ZKDC). – 1 ♂,



FIGS 8-15

Anthelephila aratrix sp. n., male: (8) elytron. (9) sternum VII, ventral view. (10) the same, lateral view. (11) tergum VII. (12) segment VIII, dorsal view. (13) the same, lateral view. (14) tegmen. (15) median lobe of aedeagus. Scale (1 mm): A – Fig. 8; (0.5 mm): B – Figs 14, 15, C – Fig. 11, D – Figs 9, 10, 12, 13.



Figs 16-25

Anthelephila besucheti Bonadona, male: (16) sternum VII. (17) sternite VIII (half). (18) tegmen. *A. cardamontis* sp. n., male: (19) sternum VII. (20) sternite VIII (half). (21) tegmen. *A. irula* sp. n., male: (22) sternum VII. (23) sternite VIII (half). (24) tergite VIII. (25) tegmen. Scale (0.2 mm): A – Fig. 20, B – Fig. 16, C – Figs 17, 18, 23, 25, D – Figs 19, 21, 22, 24.

1 ♀, CEYLAN Northern, Mullaivittu 6.II.70 Mussard Besuchet Löbl [p+h] \ Paratype [p; red label] \ *Anthelephilus besucheti* nsp. P.Bonadona dét. 1976 [p+h] (MHNG). – 1 ♂, CEYLAN North western Rajakadalawa 31.I.1970 Mussard Besuchet Löbl [p+h] \ Paratype [p; red label] \ *Anthelephilus besucheti* nsp. P.Bonadona dét. 1976 [p+h] (MHNG). According to Bonadona (1989), the three paratypes from Yala and Mullaivittu are deposited also in the coll. Bonadona (MNHN; not examined).

REDESCRIPTION: Body length 2.8-3.5 mm (holotype 2.8 mm).

MALE (paratype, Yala): Mesosternum, metasternum and all legs simple. Sternum VII (Fig. 16) nearly simple, slightly produced and bluntly pointed postero-medially, its apical margin with numerous short, stiff setae. Tergum VII moderately widely rounded posteriorly, with apical margin slightly emarginate medially in dorso-caudal view. Sternite VIII (Fig. 17); paired prongs rather simple, dorso-ventrally flattened, conspicuously wide, strongly narrowed, convergent and rounded apically; each prong with five, conspicuously long, thick setae dorsally and about eight shorter, thick setae ventrally, along lateral margin. Tergite VIII simple, its posterior margin rather widely rounded, sparsely setose. Aedeagus (Fig. 18); apical portion of tegmen 0.6 times as long as basal-piece, trilobed apically, middle lobe wide, rounded apically, distinctly shorter and wider than narrow lateral lobes.

FEMALE (paratype, Yala): Externally identical with male, except as follows: both sternum and tergum VII evenly rounded posteriorly, sternum impressed ventro-medially and with apex moderately bent ventrad.

DIFFERENTIAL DIAGNOSIS: *Anthelephila besucheti* is closely related to *A. irula* sp. n. from southern India. For their separation see the key and the differential diagnosis of the latter species.

DISTRIBUTION: Sri Lanka.

Anthelephila cardamontis sp. n.

Figs 1, 19-21

TYPE MATERIAL: Holotype ♂, S-INDIA, Kerala state, 10 km SW of Kumily, Vallakadavu vill. env., 77°07'E 9°31'N \ Cardamom hills, alt. ca 1000 m, 24.xii.1993, sifted, Z. Kejval & D. Boukal lgt. (NMPC). – Paratypes: 7 ♂♂, same data as holotype (ZKDC, 1 specim. in MHNG).

ETYMOLOGY: Named after the type locality; composed of cardamom (Cardamom hills Mts.) and Latin montium/montis (mountain ridge).

DESCRIPTION: Body length 3.4-3.8 mm (holotype 3.4 mm).

MALE (holotype): Body rufous, head moderately darker, elytra with two pairs of vaguely outlined, brown black spots (Fig. 1); anterior spots circular, situated at about midlength, distinctly separated from both suture and lateral margins, posterior spots situated apically, slightly touching latero-apical margins; antennae, legs and palpi rufous.

Head: 1.3 times as long as wide, longitudinally oval, nearly evenly rounded posteriorly in dorsal view; posterior temporal angles entirely obsolete. Surface smooth, very glossy; dorsal punctation distinct but rather sparse and uneven. Setation short, mostly subdecumbent, with scattered suberect to erect, slightly longer setae. Eyes medium sized, moderately convex. Antennae rather long, clearly exceeding base of

pronotum, moderately but distinctly enlarged in apical third; antennomere X 1.2 times and antennomere XI 2.1 times as long as wide.

Thorax: Pronotum 1.2 times as long as wide, slightly narrower than head including eyes, unevenly, somewhat widely rounded anteriorly, strongly and nearly straightly narrowing posteriorly, and shallowly impressed postero-laterally close before base (not constricted posteriorly in dorsal view); entire dorsal outline of pronotum convex, only slightly impressed close before basal margin; pronotal disc evenly shaped, without longitudinal impressions. Surface largely smooth and very glossy, postero-lateral impression shortly, distinctly wrinkled and this basal corrugation extending also somewhat dorso-laterally; dorsal punctation as on head, somewhat denser mesally. Setation as on head. Both mesosternum and metasternum simple.

Elytra: 1.7 times as long as wide, longitudinally ovoid, strongly convex, narrowed and rather conjointly rounded apically; humeri entirely obsolete; postscutellar impression absent. Surface smooth, very glossy; punctation somewhat finer and distinctly sparser than on head. Setation distinctly longer than on head, and generally more raised, mostly decumbent, with numerous erect setae. Metathoracic wings nearly entirely reduced.

Legs: Penultimate tarsomeres rather narrow, with terminal tarsomere articulated before midlength; all legs simple. Setation normally developed, inconspicuous.

Abdomen: Sternum VII (Fig. 19) rather simple, somewhat truncate and with posterior margin slightly sinuous, sparsely setose, with some longer, mostly scattered stiff setae. Tergum VII narrowed and nearly evenly rounded posteriorly. Sternite VIII (Fig. 20); paired prongs wide and nearly parallel-sided in basal half, angulately protruding laterad at about mid-length and then strongly narrowed and converging, with apex laterally flattened and rounded; surface of prongs finely setose along ventral margin of their apical narrowed portion, and with tuft-like accumulation of longer, stiff setae on/near lateral protrusions. Tergite VIII simple, arcuate, with posterior margin evenly rounded, sparsely setose.

Aedeagus (Fig. 21): Apical portion of tegmen 0.4 times as long as basal-piece, trilobed apically, middle lobe wide basally, strongly narrowing towards blunt apex, slightly shorter than evenly narrow, lateral lobes.

FEMALE: Unknown.

VARIABILITY: Some of the examined specimens are generally more pale in colour and with very fine punctation on the surface (probably teneral specimens).

DIFFERENTIAL DIAGNOSIS: *Anthelephila cardamontis* sp. n. may resemble *A. irula* sp. n. and *A. besucheti* by the evenly sparse punctation of the elytra and the simple metasternum in males. It differs from these species especially by the paler colouration, the presence of dark spots on the elytra, the smooth and glossy surface of both the head and pronotum, and in the morphology and setation of male sternum VII and sternite VIII.

DISTRIBUTION: India (Kerala).

COMMENTS: The specimens were collected by sifting forest litter.

Anthelephila congoana Uhmann, 1981

Figs 26-29, 34

Anthelephilus congoanus Uhmann, 1981: 193, figs 4-9.

TYPE MATERIAL: Holotype ♂, Soil-Zoological Exp. Congo-Brazzaville Sibiti Irho rain forest [p] \ 2.12.1963. No331 beaten in forest leg. Balogh & Zicsi [p] \ Holotypus 1980 *Anthelephilus congoanus* Uhmann [p+h; red frame] \ Typus [p; red label] \ *Anthelephilus congoanus* n.sp. det.G.Uhmann 1980 [p] (HNHM). – Paratypes: 1 ♀, 331 [p; bluish label] \ Congo-Exped. d. Inst. Syst. Zool. Budapest 16.X.63. – 21.I.64. Fundort No.: 331 [p+h] \ Sibiti, Irho oil-palm plantat. 2. XII. 1963 leg. Balogh / Zicsi [p+h] \ Para-typus [p; red label] \ *Anthelephilus congoanus* n. sp. det. G. Uhmann 1980 [p] \ Paratypus 1980 *Anthelephilus congoanus* Uhmann [p+h; red frame] (DCDC). – 1 ♂, Congo-Exped. d. Inst. Syst. Zool. Budapest 16.X.63. – 21.I.64. Fundort No.: 261 [p+h] \ Sibiti, Irho rain forest K 27.11.1963 leg. Balogh / Zicsi [p+h] \ 261 [p; bluish label] \ Paratypus 1980 *Anthelephilus congoanus* Uhmann [p+h; red frame] \ Para-typus [p; red label] \ *Anthelephilus congoanus* n. sp. det. G. Uhmann 1980 [p] (DCDC). – 1 ♂, Soil-Zoological Exp. Congo-Brazzaville Sibiti Irho rain forest \ 26.11.1963. No 249 singled on fallen fruits leg. Balogh & Zicsi \ Paratypus 1980 *Anthelephilus congoanus* Uhmann \ Para-typus \ *Anthelephilus congoanus* n.sp. det.G.Uhmann 1980 [p] (HNHM). – 1 ♀, Soil-Zoological Exp. Congo-Brazzaville Kindamba, Méya Bangou forest \ 9.11.1963. No 141 singled fallen fruits in forest leg. Endrödy-Younga [the 3th to 5th label the same] (HNHM). – 2 ♂♂, 2 ♀♀. Soil-Zoological Exp. Congo-Brazzaville Lefinie reservation Nambouli river \ 11.1.1964. No 652 beaten in galery forest leg. Balogh & Zicsi [the 3rd to 5th label the same] (HNHM, ZKDC). – 1 ♀, Congo-Exped. d. Inst. Syst. Zool. Budapest 16.X.63.-21.I.64. Fundort No.: 597 \ Lefinie, Reservat. Nambouli River, 1.7. K. bushes/forest 1964 leg. Balogh/Zicsi \ 597 [the 3th to 5th label the same] (HNHM).

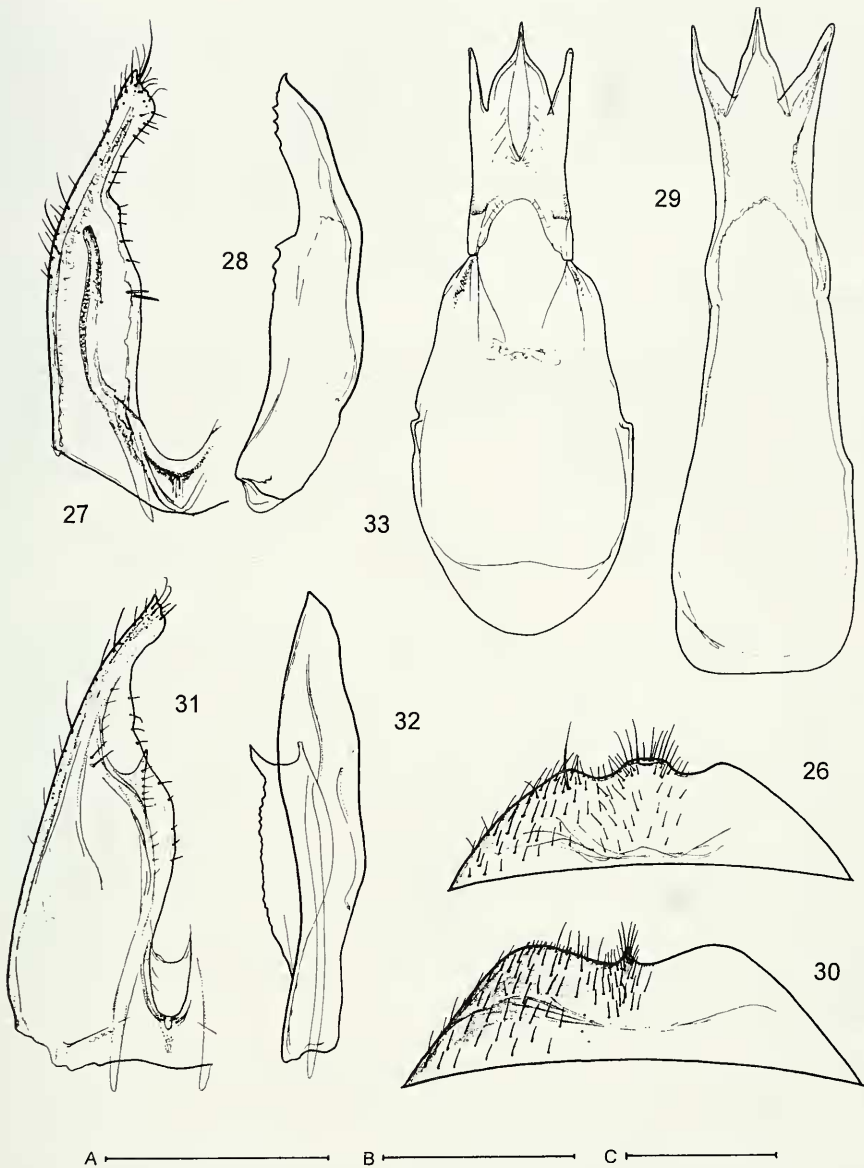
OTHER MATERIAL EXAMINED: 2 ♂♂, 2 ♀♀, Uganda, Ruwenzori Mts., above Bundibugyo, 1300m, 21.V.1993, Cuccodoro & Erne leg. (MHNG, 1 specim. ZKDC). – 1 ♂, Uganda, Ruwenzori, above Kilembe, 1950 m, 4.v.1993, Cuccodoro & Erne leg. (MHNG). – 1 ♀, W-Uganda. SW of Hioma, Rwera env., 30.xi.2001, M. Snížek leg. (ZKDC).

REDESCRIPTION: Body length 3.5-4.3 mm.

MALE (paratype, ZKDC): Mesosternum simple; metasternum with a pair of strong, apically setose protrusions posteriorly, near median margin of metacoxae. All legs simple and normally setose; basal protarsomere enlarged, rather long and wide. Sternum VII (Fig. 26) with posterior margin distinctly sinuous, its middle lobe wider, slightly upturned apically and more lengthily setose. Tergum VII evenly rounded posteriorly. Sternite VIII (Figs 27, 28); prongs rather simple, narrowed and moderately converging distally in dorsal view, their ventral margin/edge coarsely denticulate at about midlength and subapically, apex of prongs somewhat obliquely truncate and pointed; setation of prongs less conspicuous, rather fine and scattered, with some longer setae apically. Tergite VIII with posterior margin moderately emarginate medially. Aedeagus (Fig. 29); apical portion of tegmen 0.8 times as long as basal-piece, trilobed apically, all three lobes narrowing towards apex, middle lobe slightly longer and more pointed.

FEMALE (paratype, DCDC): Externally identical with male, except as follows: metasternum simple, lacking paired protrusions; basal protarsomere of smaller size; sternum VII simple, its posterior margin slightly unevenly rounded and bearing a tuft of dense, longer setae medially; tergum VII (Fig. 34) strongly narrowed, tapering and longer, densely setose apically.

VARIABILITY: Moderately variable in characters of corrugation and microsculpture of the head and pronotum. Some of the specimens from Uganda differ in the



FIGS 26-33

Anthelephila congoana Uhmman, male: (26) sternum VII. (27) sternite VIII (half). (28) prong of sternite VIII (outline), lateral view. (29) tegmen. *A. ovipennis* (Bonadona), male: (30) sternum VII. (31) sternite VIII (half). (32) prong of sternite VIII (outline), lateral view. (33) tegmen. Scale (0.2 mm): A – Figs 27, 28, 31, 32, B – Fig. 29, C – Figs 26, 30, 33.

more distinct corrugation of the frontal surface of the head, extending posteriad along median margins of eyes, and/or in the less glossy, finely microsculptured surface of the pronotum, especially on the lateral sides.

DIFFERENTIAL DIAGNOSIS: *Anthelephila congoana* is most closely related to *A. ovipennis*, as suggested especially by the very similar form of male sternite VIII, but differs by the head being somewhat unevenly rounded and slightly produced postero-medially, the simply setose male metatibiae, male sternum VII sinuous apically with a wide middle lobe, male tergite VIII moderately emarginate apically, female sternum VII tapering apically, as well as by some details in morphology of male sternite VIII and the tegmen.

DISTRIBUTION: Zaire, Uganda.

Anthelephila curvitorsis sp. n.

Figs 3, 38-43

TYPE MATERIAL: Holotype ♂, S. Afr: Kruger Nat. Pk Pumbe sands 24.12 S - 31.55 E \ 22.11.1994; E-Y: 3063 groundtraps Endrödy, Bellamy \ ground traps with meat bait (TMP). – Paratypes: 1 ♂, same data as holotype (ZKDC); 1 ♀, S. Afr: Little Karoo Gamkaberg, 1000 m 33.44 S - 21.57 E \ 21.12.1993; E-Y: 3069 ground traps, 24 days leg. Endrödy-Younga \ groundtrap with banana bait (TMP). – 1 ♂, 4 ♀♀, SOUTH AFRICA: KZN Tembe Elephant Park, Sihangwane Area 27.02S 32.25E 100 m 03.ii.1996 R. Stals \ Habitat: Sand forest Sieved from forest litter \ National coll. of insects Pretoria, S. Afr. (SANC, 1 ♀ ZKDC).

ETYMOLOGY: Composed from Latin *curvatus* (curved) and tarsus; named in reference to the curved basal protarsomere of the males.

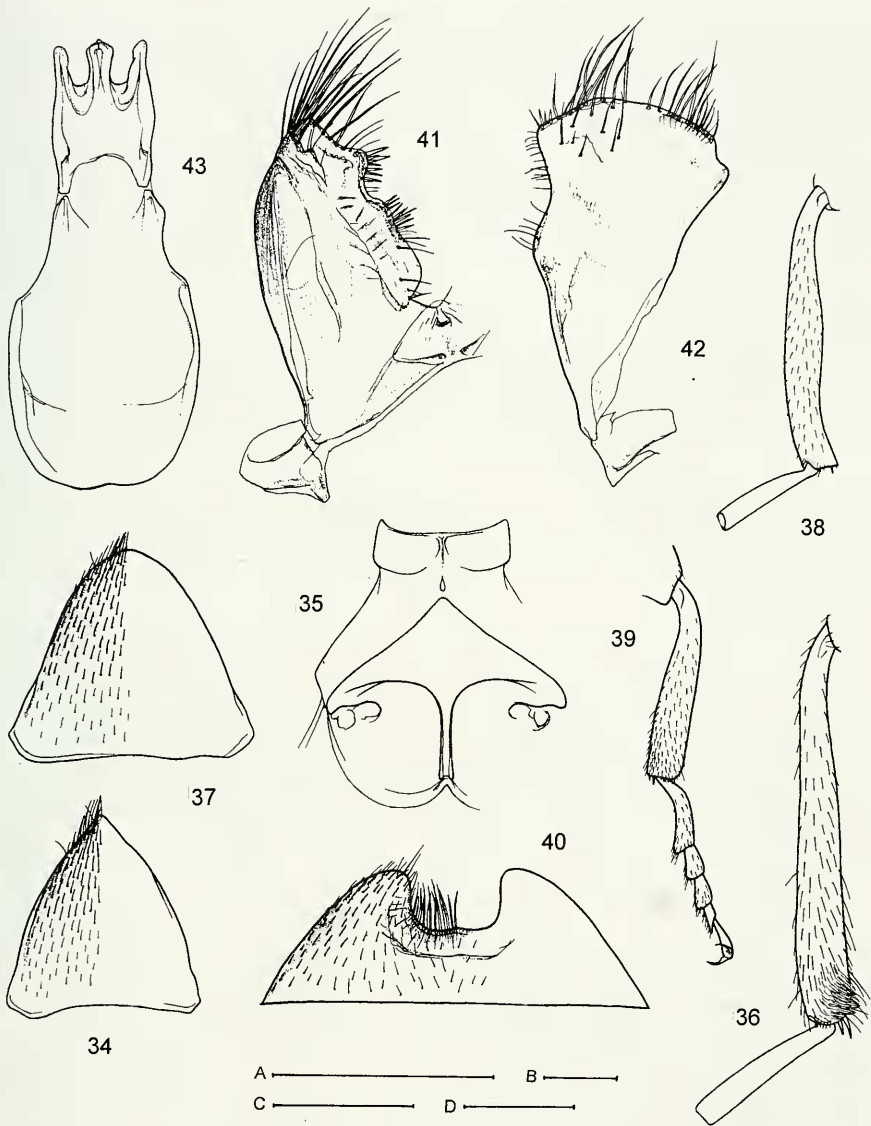
DESCRIPTION: Body length 2.8-3.6 mm (holotype 3.6 mm).

MALE (holotype): Body uniformly black; legs dark brown, base of tibiae and tarsi paler, rufous brown, antennae and palpi dark brown, basal and apical antennomeres slightly paler.

Head: 1.3 times as long as wide, longitudinally oval, with base rather evenly rounded in dorsal view; posterior temporal angles entirely obsolete. Surface with extremely fine, dense, net-like microsculpture and thus only moderately glossy; dorsal punctation distinct, but somewhat obscured by microsculpture, uneven, punctures rather shallow, separated by more than their diameter. Setation inconspicuous, very short, fine, mostly appressed, with few short, erect setae. Eyes small, slightly convex. Antennae moderately exceeding base of pronotum, distinctly enlarged in apical third; antennomere X slightly transverse, 0.95 times as long as wide, antennomere XI 1.4 times as long as wide.

Thorax: Pronotum 1.3 times as long as wide, moderately narrower than head including eyes, evenly round/globose anteriorly in dorsal view, strongly narrowing posteriorly and distinctly impressed postero-laterally (constricted posteriorly in dorsal view, Fig. 3); entire dorsal outline of pronotum more or less convex in lateral view; pronotal disc with shallow median longitudinal furrow in anterior and posterior thirds. Surface only moderately glossy, with the same microsculpture as head, bottom of postero-lateral impressions very finely wrinkled; dorsal punctation slightly coarser than on head, especially mesally and dorso-laterally in posterior third. Setation as on head, inconspicuous. Mesosternum simple. Metasternum with a pair of distinct longitudinal protrusions posteriorly, near median margin of metacoxae, their edge covered with brownish, felt-like setation.

Elytra: 1.9 times as long as wide, ovoid, strongly convex, narrowed and truncate apically; humeri entirely obsolete; postscutellar impression absent. Surface some-



FIGS 34-43

(34) *Anthelephila congouana* Uhmann, female tergum VII. *A. ovipennis* (Bonadona), male: (35) mesosternum and adjacent sclerites. (36) metatibia. (37) female tergum VII. *A. curvitaris* sp. n., male: (38) metatibia. (39) protibia with tarsus. (40) sternum VII. (41) sternite VIII (half). (42) prong of sternite VIII, lateral view. (43) tegmen. Scale (0.2 mm): A – Figs 41, 42, B – Figs 34-39, C – Fig. 43, D – Fig. 40.

what uneven and less glossy; punctation similar, only moderately sparser than on head and pronotum. Setation similar to that on head, very short and inconspicuous, with very vague indication of two transverse bands of slightly thicker, whitish setae. Metathoracic wings almost entirely reduced.

Legs: Penultimate tarsomeres rather narrow, terminal tarsomere subapically in metatarsi; metatibiae moderately sinuous, apically strongly angulately produced on inner side (Fig. 38); basal protarsomere conspicuously long, distinctly curved (Fig. 39). Setation normally developed, inconspicuous.

Abdomen: Sternum III with shallow longitudinal impression postero-medially. Sternum VII (Fig. 40) deeply emarginate posteriorly, its postero-median margin long and densely setose. Tergum VII evenly rounded posteriorly. Sternite VIII (Figs 41, 42): paired prongs short and wide in dorsal view, strongly widened in apical half in lateral view, hollowed dorso-medially, their ventral median margin sinuous and bearing numerous densely spaced, stiff setae, wide apex of prongs conspicuously long and richly setose. Tergite VIII arcuate, nearly evenly rounded posteriorly.

Aedeagus (Fig. 43): Apical portion of tegmen 0.5 times as long as basal-piece, trilobed apically, middle lobe moderately widening towards subtruncate apex and with small apical protuberance, as long as and apically wider than lateral lobes.

FEMALE: Externally identical with male, except as follows: antennae slender, less enlarged distally; metasternum simple, lacking paired protrusions; metatibiae simple, rather straight, basal protarsomere much shorter and straight; sternum III evenly convex, lacking impression; sternum VII simple, its posterior margin quite evenly rounded.

DIFFERENTIAL DIAGNOSIS: Of the related Afrotropical species, *Anthelephila curvitaris* sp. n. may resemble *A. congoana* in having a more elongate and posteriorly rather oval head, but differs clearly by the pronotum being strongly impressed postero-laterally and distinctly constricted in dorsal view, and by all the male characters (e.g. long and curved basal protarsomere, moderately sinuous, angulately produced and simply setose metatibiae apically on inner side, quite different forms of sternum VII and sternite VIII).

DISTRIBUTION: South Africa.

Anthelephila imperatrix LaFerté-Sénéctère, 1849

Figs 2, 6, 7, 44-53

Anthelephilus imperator LaFerté-Sénéctère, 1849a: 2, fig. 2.

Anthelephilus imperator LaFerté-Sénéctère, 1849b: 66, fig. 2; see Chandler (2000).

Anthelephila imperatrix: Krekich-Strassoldo, 1931: 15, fig. 30.

Anthicus formicarius Nietner, 1856: 533.

Anthicus quisquiliarius Nietner, 1857b: 20.

Anthicus myrmecodes Gemminger, 1870: 123.

Formicomus (Anthelephilus) imperator var. *ruficolor* Pic, 1916a: 5.

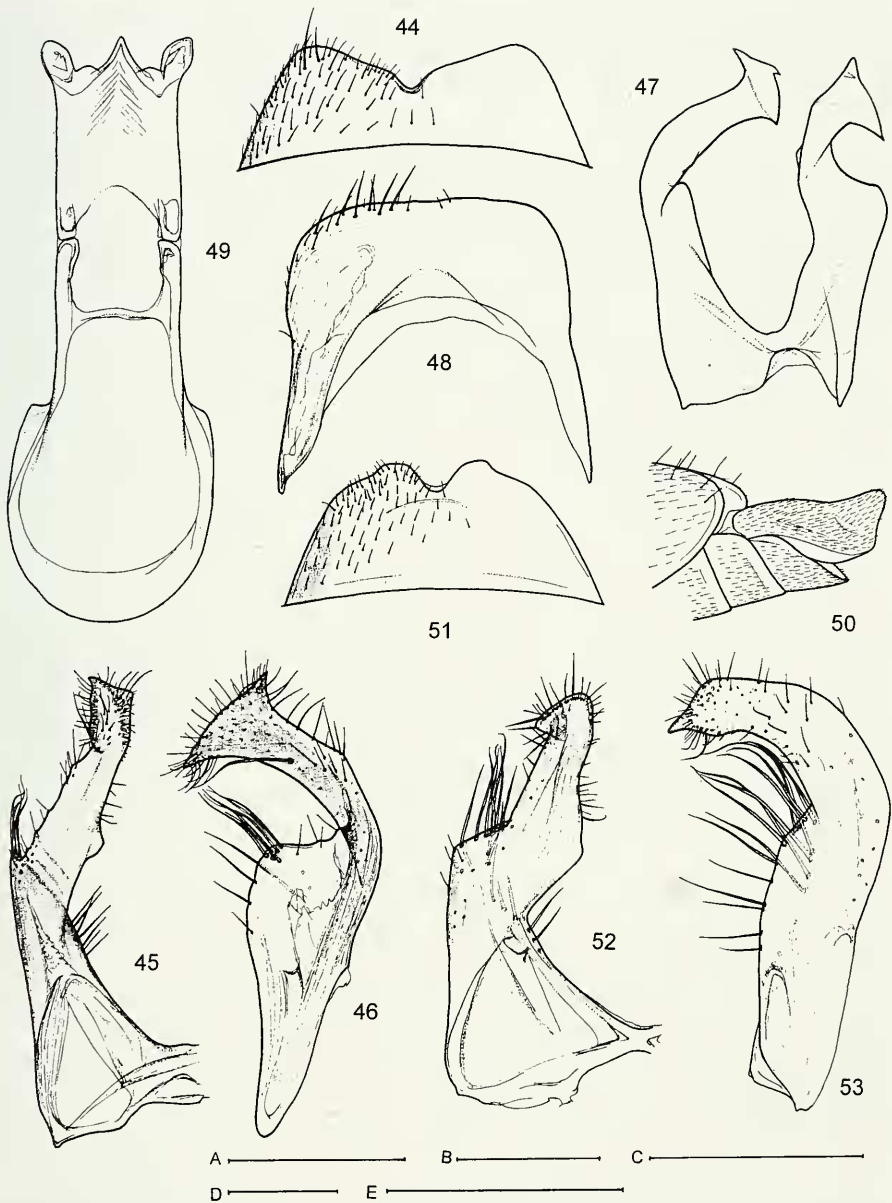
Formicomus cribriceps Marseul, 1876: 459.

Formicomus [sic!] (*Anthelephilus*) *cribriceps*: Miwa, 1931: 180 (misspelling).

Anthelephila cribriceps [sic!]: Hua, 2002: 131 (misspelling).

Formicomus (Anthelephilus [sic!]) *puncticeps* Pic, 1916b: 11, **syn. n.**

TYPE MATERIAL: *Anthelephilus imperator* – Holotype ♂ [lacking distal antennomeres and foreleg]: 47394 [p] \ Linga Röttg. [h; grey label] \ *imperator* Laf.*typ. [h; grey label] \ Type [p; reddish label] \ Hist.-Coll. (Coleoptera) Nr. 47394 *Anthelephilus imperator* Laf. Linga. Roettger Zool. Mus. Berlin [p; yellow label, black frame] (MNHB). *Formicomus puncticeps* – Syntypes: 1 ♂, Kulu [p] \ type [h; yellowish label] \ TYPE [p; red label] \ Muséum Paris Coll. M. Pic [p] \ *Anthelephilus puncticeps* Pic [h] (MNHN). – 1 ♂, Kulu [h] \ Museum Paris Coll. M. Pic [p]. *F. imperator* var. *ruficolor* – Syntypes: 2 ♂♂, Manille ... [h; partly illegible] \ type



FIGS 44-53

Anthelephila imperatrix LaFerté-Sénéctère (Indonesia): (44) male sternum VII. (45) male sternite VIII (half). (46) prong of male sternite VIII, lateral view. (47) male sternite VIII, antero-dorso-lateral view. (48) male tergite VIII (49) tegmen. (50) apical portion of female abdomen, lateral view. *A. imperatrix*, male (Japan): (51) sternum VII. (52) sternite VIII (half). (53) prong of sternite VIII, lateral view. Scale (0.2 mm): A - Fig. 49, B - Figs 44-46, 48, C - Figs 52, 53, D - Figs 47, 51; (1 mm): E - Fig. 50.

[h] \ TYPE [p; red label] \ v. ruficolor Pic [h]; 4 specimens, bearing label "Manille" or "Manille Baer", but lacking the type labels (MNHN, coll. Pic). *Formicomus cribriceps* – Syntypes: 1 ♂, 1 ♀ [mounted on common label]: *Formicomus cribriceps* Japon ... [h; yellowish round label; partly illegible]; 5 specimens, mounted in the same way, but lacking the locality label (all MNHN).

OTHER MATERIAL EXAMINED: INDONESIA: 2 ♀♀, Sumatra, Aceh-Selatan Prov., Babahrot, 100 m, 7.vii.1983, J. Klapperich leg. (SMNS). – 1 ♀, C Sulawesi, 17 km E Pendolo, 800 m, 120.45.49 E 2.06.33 S 4.-9.vii.1999, Bolm leg. (SMNS). – 3 ♂♂, 3 ♀♀, Lombok, Sembalun Lawang, Mt. Rinjani, 1700 m, 6.-8.ii.1995, Bolm leg. (SMNS, ZKDC). – 1 ♀, Lombok, Senggigi Pemenang, 20.xi.1999, E. Heiss leg. (ZKDC). – 2 ♀♀, Ceram Island, Wahai env., 12.ii.1989, M. Jäch leg. (NHMW). – 5 ♂♂, 2 ♀♀, Sula Islands (E of Sulawesi), Mangole Island, vii.-xii.1977, V. & G. Wegener leg. (NHMB, ZKDC). PHILIPPINES: 1 ♂, 2 ♀♀, Mindanao, Maramag Prov., Portulin, 750 and 1700 m, 3.-4.i.1991, Bolm leg. (NHMB). VIETNAM: 1 ♂, Hanoi, riverbank, 26.ix.1980, F. Hieke leg. (GUPC). – 1 ♂, SE of Hanoi, Yên So, 19.-23.iv.1966, G. Topál leg. (ZKDC). – 3 ♀♀, Da Nang, 2.-3.xi.1970, A. R. Gillogly leg. (GUPC, DCDC). USA (pacific territories): 2 ♂♂, 2 ♀♀, Mariana Islands, Saipan Island, 28.viii.1951, R. M. Bohart leg. (DCDC, ZKDC). – 1 ♀, Saipan Island, vi.1958, N.L.H. Krauss leg. (DCDC). – 1 ♂, 1 ♀, Mariana Islands, Guam Island, Piti, 18.vii.1936, O. H. Swezey leg. (BMNH). – 1 ♀, Guam Island, Yona, 21.iv.1936, E. H. Bryan leg. (BMNH). – 2 ♀♀, Guam Island, Pago Bay, 2.vi.1945, H. S. Dybas leg. (DCDC). – 1 ♀, Guam Island, ca 1.5 km SE of Asan, 180-250 m, 5.xi.1947, H. S. Dybas leg. (DCDC); 1 ♀, Mariana Islands, Tinian Island, 1.-14.iv.1945, H. S. Dybas leg. (DCDC). – 1 ♂, Palau Islands, Koror Island, 24.xi.1947, H. S. Dybas leg. (DCDC). – 2 ♂♂, 1 ♀, Hawaii, Honolulu, Internat. Airport, 19.ii.1968, G. Funasaki leg. (DCDC, GUPC). JAPAN: 3 ♂♂, 2 ♀♀, G. Lewis leg. (BMNH). – 5 ♂♂, 14 ♀♀, Kyushu, Oita, Reitter (NMPC, ZKDC). – 2 ♂♂, 1 ♀, Honshu, Kobe, Harada, 23.ix.1915, J. E. Lewis leg. (BMNH). – 1 ♀, Honshu, Kobe, Hyogo, 18.iv.1931 (NMPC); series of specimens, Honshu, Idzu, vi.1910, S. Akiyama leg. (BMNH). – 1 ♂, 2 ♀♀, Okinawa Island, Motobu Peninsula, W slope of Katsu Dake, ca 800 m, 28.ix.1945, F. G. Werner leg. (DCDC, ZKDC, GUPC). – 1 ♂, 1 ♀, Okinawa, Yogi, Naha, 10.viii.1951, F. G. Werner leg. (DCDC). CHINA: 1 ♂, NE Zhejiang Prov., Chusan [=Zhoushan] Archipelago, Entrance Island, Walker leg. (BMNH). – 1 ♀, N Zhejiang Prov., ca 100 km SW of Shanghai, Haining, Walker leg. (BMNH). – 1 ♀, Fukien Prov., Kuatun, 10.v.1946, Tschung Sen. leg. (SMNS). – 1 ♂, Guangxi Prov., Gul Lin, 30.xii.1981, Rougemont leg. (coll. Bonadona, MNHN). TAIWAN: 1 ♂, Akau, E. Csiki coll. (HNHM). NEPAL: 2 ♂♂, Kathmandu, Baneshwar, 1300 m, 21.-25.vi.1998, W. Schawaller leg. (SMNS, ZKDC). – 1 ♂, same data, except: 1350 m, 20.-21.v.2000 (SMNS). – 1 ♂, Kathmandu valley, Pashupatinath, Bagmati River, 1300 m, 14.x.1992, A. Weigel leg. (NKME). – 1 ♂, 1 ♀, NE of Kathmandu, Gorkana Park, near Bagmati river, 27°43'N 85°23'E, 29.ix.1996, M. Hartman leg. (NKME, ZKDC). – 2 ♂♂, same data, except: 1300-1400 m, 28.v.1997, Grill/Hartmann leg. (NKME). – 6 ♂♂, 3 ♀♀, same data, except: 1280 m, 24.xi.1998 (NKME). – 7 ♂♂, 1 ♀♀, same data, except: 1340 m, 17.vi.1999 (NKME). – 1 ♂, 1 ♀, same data, except: Bagmati riverbank, 1350 m, 15.6.2001, A. Kopetz leg. (NKME). – 4 ♂♂, 2 ♀♀, 6 km SSW of Kathmandu, bank of Taudaha Lake, 27°39'N 85°09'E, 1300 m, 17.vii.2001, M. Hartmann leg. (NKME, ZKDC). – 1 ♂, Dhaulagiri Himal, Kali Gandaki valley, Jhi vill. N Beni, 1750 m, 16.vi.1998, Berndt & Schmidt leg. (ZKDC). – 1 ♂, 1 ♀, Annapurna Mts., S of Ulleri, Ghorepani, 2000 m, 16.vi.1993, Schmidt leg. (ZKDC). – 1 ♀, Kathmandu Prov., Godwari, 1600 m, 31.iii.1984, Löbl leg. (MHNG). – 1 ♀, E-Nepal. Arun valley, Chichila, 1950 m, 31.v.1983, M. Brancucci leg. (NHMB). – 1 ♀, E-Nepal, Biratnagar, 140 m, 21.v.1980, W. Wittmer leg. (NHMB). INDIA: 1 ♂, Meghalaya, Shillong (NHMW). – 3 ♀♀, West Bengal, Nagarkanda, 3.-14.i.1980, G. Topál leg. (GUPC). – 1 ♀, West Bengal, Calcutta, 6.vii.1972, Basel Exped. 1972 (coll. Bonadona, MNHN). – 3 ♂♂, 1 ♀, Orissa, Ganjam Prov., N of Berhampur (=Brahmapur), Kalasandrapur env., 20.-21.ii.1994, Z. Kejval leg. (ZKDC). – 1 ♂, 1 ♀, Uttaranchal, W of Almora, H. G. Champion leg. (BMNH). – 4 ♂♂, 5 ♀♀, Uttaranchal, 22 km N of Rishikesh, 450 m, 30.x.1979, I. Löbl leg. (MHNG, GUPC). – 1 ♂, 3 ♀♀, Uttaranchal, 16 km of Srinagar, 550 m, 29.x.1979, I. Löbl leg. (NHMG, ZKDC). – 26 ♂♂, 29 ♀♀, Uttaranchal, ca 13 km NW of Nainital, Khairna Bridge env., 900-1000 m, 13.-17.vii.2003, Z. Kejval & M. Tryzna leg. (ZKDC). – 8 ♂♂, 16 ♀♀, Uttaranchal, 10 km NE of Rishikesh, Herval river valley, Shivpuri env., ca 450 m, 26.vii.2003,

Z. Kejval & M. Trýzna leg. (ZKDC). – 1 ♂, 4 ♀♀, Uttaranchal, 20 km NE of Rishikesh, Ganga river valley, Kaudiyala env., ca 500 m, 25.-27.vii.2003, Z. Kejval & M. Trýzna leg. (ZKDC). – 1 ♂, Uttaranchal, Haldwani-Kathgodam, ca 800 m, 21.-22.vii.2003, Z. Kejval & M. Trýzna leg. (ZKDC). – 2 ♂♂, 5 ♀♀, Uttaranchal, 30 km N of Rishikesh, NW of Chamba, Arakot env., 1500 m, 29.-31.vii.2003, Z. Kejval & M. Trýzna leg. (ZKDC). – 5 ♂♂, 7 ♀♀, Uttaranchal, 25 km W of Mussoorie, Yamuna river valley, Juido env., ca 750 m, 5.-7.vii.2003, Z. Kejval & M. Trýzna leg. (ZKDC). – 11 ♂♂, 7 ♀♀, Uttaranchal, Dehra Dun, 12.iii.1952, R. N. Kothari leg. (DCDC). – 1 ♀, Uttaranchal, Baijnath, 26.vii.-28.vii.2003, E. Kučera leg. (ADBC). – 8 ♂♂, 5 ♀♀, Uttaranchal, Gangani, 1250 m, 13.-20.vi.1981, M. Brancucci leg. (NHMB). – 1 ♂, 1 ♀, Uttaranchal, Barkot, 1000-1200 m, 5.-12.vi.1981, M. Brancucci leg. (NHMB). – 1 ♀, Rajasthan, SE of Bharatpur, Keoladeo Ghana Nat. Park, 27°09'N 77°31'E, ca 170 m, 6.ix.1985, C. W. & L. B. O'Brien leg. (DCDC). – 1 ♀, 10.-12.viii.1989, Hiermeier leg. (ZKDC). – 14 ♂♂, 16 ♀♀, same locality, 13.-14.vii.2006, Z. Kejval leg. (ZKDC). – 1 ♀, Rajasthan, Udaipur, Sajjan Niwas Gardens, 24°34'N 73°41'E, 600 m, 3.-8.vii.2006, Z. Kejval leg. (ZKDC). – 2 ♂♂, Maharashtra, ca 15 km E of Savantvadi, 15°55'N 75°53'E, riverside, ca 40 m, 22.v.2006, Z. Kejval leg. (ZKDC). – 1 ♂, Goa, Salcete, 13.-16.iv.1990, E. Heiss leg. (ZKDC). – 1 ♂, 1 ♀, Karnataka, Ablathi, 12°17' N 76°06' E, x.1984, W. Lorenz leg. (GUPC). – 2 ♂♂, 3 ♀♀, Kerala, Palghat hills, Malampuzha Dam, 150 m, 27.xi.1972, Besuchet, Löbl & Mussard leg. (MHNG, coll. Bonadona MNHN). – 1 ♀, Kerala, Palghat-Coimbatore, Walayar Forest, 400 m, 23.xi.1972, Besuchet, Löbl & Mussard leg. (MHNG). – 8 ♂♂, 5 ♀♀, Tamil Nadu, Nilgiri hills, 15 km SE of Kotagiri, Kunchappanai env., 76°56' E 11°22' N, ca 900 m, 13.-20.v.1994, Z. Kejval leg. (ZKDC). SRI LANKA: 1 ♂, 1 ♀, Kandy, Mahaweli Ganga riv., 450-500 m, 30.i.-1.ii.1970, Besuchet, Löbl & Mussard leg. (MHNG). – 1 ♂, Nuwara Eliya, 18.ix.1963 (BMNH). – 2 ♂♂, 4 ♀♀, 12.iv.1882, G. Lewis leg. (BMNH). – 2 ♂♂, 1 ♀, Kandy, near Mahaweli Ganga river, 23.iii.1994, Z. Kejval leg. (ZKDC). – 1 ♀, Galle Prov., Habaraduwa, 20.8.-4.9.1982, H. J. Bremer leg. (GUPC). PAKISTAN: 1 ♂, 5 ♀♀, Swat, Col de Karakar, 1300 m, 19.v.1983, Besuchet & Löbl leg. (MHNG). – 2 ♂♂, 7 ♀♀, Swat, Madyan, 1400 m, 16.v.1983, Besuchet & Löbl leg. (MHNG). – 1 ♂, 3 ♀♀, Swat, Jowar, 1100 m, 19.v.1983, Besuchet & Löbl leg. (MHNG). – 1 ♂, Swat, Manglaur, 1150 m, 9.v.1983, Besuchet & Löbl leg. (MHNG). – 1 ♂, 2 ♀♀, Hazara, Balakot, 900 m, 4.vi.1983, Besuchet & Löbl leg. (MHNG). – 4 ♂♂, 2 ♀♀, Dir, Dir, 1500 m, 20.v.1983, Besuchet & Löbl leg. (MHNG). – 2 ♂♂, 1 ♀, Punjab, Rawalpindi, Ayub Nat. Park, 28.viii.1985, C. W. & L. B. O'Brien leg. (DCDC, ZKDC). – 1 ♂, Punjab, Rawal Lake Dam, 1.ix.1965, C. W. & L. B. O'Brien leg. (DCDC).

REDESCRIPTION: Body length 2.7-3.7 mm.

MALE (Indonesia, Lombok, ZKDC): Head and pronotum rufous; elytra largely rufous brown, with rufous base; legs, basal antennomeres and palpi rufous.

Head: 1.1 times as long as wide, globose, evenly to somewhat widely rounded posteriorly; posterior temporal angles indistinct, rounded. Eyes small, moderately convex. Surface smooth, glossy, conspicuously punctured; dorsal punctures large and rather shallow, unevenly spaced, separated mostly by less than their diameter, at places sparser, especially postero-medially. Setation evenly short, mostly subdecumbent to appressed, with sparsely scattered, short erect setae. Antennae short, slightly exceeding base of pronotum, moderately enlarged in apical third; antennomere X slightly, 1.1 times, and antennomere XI 1.7 times as long as wide.

Thorax: Pronotum 1.3 times as long as wide, much narrower than head including eyes, moderately widely rounded anteriorly, strongly narrowing posteriorly and distinctly impressed postero-laterally (constricted) in dorsal view (Fig. 2); dorsal outline of pronotum convex in anterior two thirds, then impressed and distinctly bulging before base in lateral view (Fig. 6); pronotal disc anteriorly with conspicuous median longitudinal impression/groove, apex of antebasal bulge vaguely divided medially by shallow median impression. Surface smooth, glossy, posterior constriction

of pronotum distinctly wrinkled laterally to dorso-laterally; dorsal punctation uneven, generally much finer and sparser than on head, more distinct at dorsal, convex places alongside longitudinal impression, while bottom of impression appears to be nearly impunctate. Setation as on head. Both mesosternum and metasternum simple.

Elytra: 1.7 times as long as wide, convex, clearly truncate apically; humeri entirely obsolete; postscutellar impression absent. Surface glossy; punctation uneven, ordinary punctures generally much finer and sparser than on head; in addition with fine, densely spaced, nearly contiguous punctures forming two paired oblique bands (Fig. 2); anterior bands narrow, situated in basal third, directing postero-mediad from lateral sides, posterior bands situated shortly behind mid-length, wider, more conspicuous, directing antero-mediad from lateral sides. Setation mostly as short as on head, subdecumbent to appressed, with scattered longer, erect setae, mostly pale, with setae of dense punctures contrastingly whitish, thicker, quite appressed and forming distinct setose bands. Metathoracic wings almost entirely reduced.

Legs: Penultimate tarsomeres rather narrow, terminal tarsomere rather subapical in metatarsi; all legs simple. Metatibiae rather distinctly and densely punctured, especially on inner side; setation normally developed, slightly denser and more raised on metatibiae.

Abdomen: Sternum VII (Fig. 44) truncate posteriorly, its posterior margin nearly straightly sloping towards small median notch/impression in ventral view. Tergum VII with posterior margin nearly evenly rounded, surface subapically somewhat more convex and with indication of rounded, median longitudinal edge. Sternite VIII (Figs 45, 46); paired prongs narrow in dorsal view, with lobe-like dilatation in basal half ventrally in lateral view, arcuately curved ventrad in apical half, truncate and axe-like shaped apically in lateral view, their apical widened portion with three points/protrusions (Fig. 47); surface of prongs with several longer, stiff setae at apex of ventral dilatation. Tergite VIII (Fig. 48) simple, widely rounded posteriorly.

Aedeagus (Fig. 49). Apical portion of tegmen 0.5 times as long as basal-piece, parallel-sided, trilobed apically, middle lobe nearly evenly narrowing towards bluntly pointed apex, about as long as apically wider, rounded lateral lobes.

FEMALE (Indonesia, Lombok, ZKDC): Externally identical with male, except as follows: sternum VII simple, evenly rounded posteriorly; tergum VII clearly modified (Fig. 50), projecting medially, subapically, and forming conspicuous, laterally flattened process, exceeding apical margin of tergum, surface of tergum alongside subapical process distinctly impressed.

VARIABILITY: Body colouration varies from rufous to brown black. Head globose to slightly widely rounded posteriorly in dorsal view, its dorsal surface may be smooth to somewhat uneven, shallowly longitudinally wrinkled anteriorly. Humeri clearly protruding and metathoracic wings fully developed in the six specimens from Meghalaya (Shillong). Uttaranchal (16 km of Srinagar) and Rajasthan (Keoladeo Ghana Nat. Park).

Distinctly variable in male/female abdominal characters. Male tergum VII often with more or less distinct median subapical protrusion. Process of female tergum VII of different size and form; inconspicuous, forming rather rounded edge in the

specimens from Japan, Taiwan and China; more or less protruding in the specimens from Nepal (differences even within the same locality sample); female tergum VII strongly tapering, evenly shaped without any median, subapical process/edge in the specimens from Rajasthan (Keoladeo Ghana Nat. Park). Morphology of male sternum VII and sternite VIII varies in details extremely as follows; the specimens from Japan and Taiwan: sternum VII deeply emarginate/notched postero-medially, lateral sides of emargination moderately lobed (Fig. 51), paired prongs of sternite VIII less dilated in basal half, their apical portion simple, moderately enlarged and then narrowing towards pointed apex (Figs 52, 53); the specimens from Nepal: postero-medial emargination/notch of sternum VII less conspicuous and its postero-lateral sides rather evenly rounded, paired prongs of sternite VIII distinctly dilated in basal half, dorsal margin of their apical portion with minute pointed angle to distinctly projecting process; the specimens from Rajasthan (Keoladeo Ghana Nat. Park): sternum VII evenly emarginate and rounded posteriorly, paired prongs of sternite VIII less dilated in basal half, their apical portion simple, nearly evenly narrowing towards pointed apex.

DIFFERENTIAL DIAGNOSIS: *Anthelephila imperatrix* is very conspicuous in having the deeply longitudinally impressed and posteriorly clearly constricted pronotum, large, globose and rather coarsely punctured head, and whitish setose bands on the elytra. It shares this combination of characters only with *A. aratrix* sp. n., and differs by the characters given in the description of the latter species and in the key.

DISTRIBUTION: Recorded from Indonesia (Uhmann, 1988), Philippines (Pic, 1903, 1916a), India (Krekich-Strassoldo, 1931; Uhmann, 1983, 1987; Telnov, 2003), Bangladesh (Bonadona, 1978), Laos, Vietnam, Sri Lanka, Nepal and Pakistan (Uhmann, 1983, 1987, 1988, 1989; Telnov, 2003), Japan: Honshu, Shikoku, Kyushu, Tsushima and Ryukyu Islands (Nomura, 1962; Werner, 1965; Sakai, 1989; Lafer, 1996; mostly as *F. cribriceps*), China: Zhejiang, Fukien and Guangxi Prov. (Uhmann, 1988, as *F. cribriceps*), Taiwan (Krekich-Strassoldo, 1913; Miwa, 1931; Uhmann, 1983; Hua, 2002; mostly as *F. cribriceps*) and from the USA and Japanese territories in the Pacific Ocean: Bonin, Volcano, Mariana, Caroline and Palau Islands (Blair, 1942; Werner, 1965).

COMMENTS: Nietner (1856) described *Anthicus formicarius* from Sri Lanka and later (Nietner, 1857) proposed replacement name, *A. quisquiliarius*, because of homonymy with *A. formicarius* LaFerté-Sénéctère, 1849. Gemminger (1870) overlooked this fact and proposed for the same reasons another replacement name, *A. myrmecodes*. Both former names were synonymized with *Anthelephilus imperator* by Krekich-Strassoldo (1913).

Having studied the type specimens of *Formicomus imperator* var. *ruficolor* and *F. puncticeps*, I failed to find any significant differences from *A. imperatrix* and I believe them to be identical. The former taxon was first placed in synonymy with *A. imperatrix*, without any comments, by Telnov (2003). All the examined specimens of *Anthelephilus* (or *Anthelephila*) *puncticeps*, listed for India, Nepal and Bhutan by Uhmann (1986, 1987, 1990a) and Telnov (2003), were found to be misidentified; they form a part of the type series of *Anthelephila kresli* sp. n., *A. lobulicula* sp. n., and *A. sculpta* sp. n.

Formicomus cribriceps was described by Marseul (1876) based on specimens from Japan ("Nagasaki et Hiogo") collected by M. G. Lewis. It was synonymized with *Anthelephilus imperator* by Krekich-Strassoldo (1913), who found the specimens from Indonesia, Sri Lanka, Taiwan and Japan identical, showing only differences in colouration. This synonymy was followed by Winkler (1927) and Telnov (2003), and ignored by Miwa (1931), Nomura (1962), Sakai (1989), Lafer (1996), and Hua (2002). In his check-list of Japanese insects, Sakai (1989) listed both *Anthelephila imperatrix* and *A. cribriceps*, based on the differences between specimens from "Japan proper" and the Japanese island territories in the Pacific Ocean, treated as *Anthelephilus imperator* by Werner (1965) (M. Sakai, pers. comm.). In my opinion, the examined specimens of *A. imperatrix* from Japan, Taiwan, China (= *F. cribriceps*), and especially those from Rajasthan (Keoladeo Ghana Nat. Park) show detailed but distinct differences in male/female abdominal characters from the typical form. Despite this, I have refrained from treating them as separate taxa (most likely as geographical subspecies), mainly because of the variation of these characters observed in the specimens from Nepal, and lack of material from China and the riverbasins of the Ganges and Brahmaputra in India.

Based on label data of the examined specimens, *A. imperatrix* has been collected by sweeping grasses, sifting garbage-heap, forest leaf litter, in decaying coconut logs and under washed up plant material. In India, I found it locally quite common on/near various rooting, vegetable matter, especially near riverbanks. Considering its aptery, comparatively less conspicuous variation of the male characters and distribution of the related species, *A. imperatrix* is very probably a native of the Asian mainland, and most of its island occurrences, especially in the case of Micronesia and Hawaii, are to be regarded as rather recent introductions.

Anthelephila irula sp. n.

Figs 22-25

TYPE MATERIAL: Holotype ♂, S-INDIA, Tamil Nadu state, Nilgiri hills, 15 km SE of Kotagiri, Kunjappanai env., 76°56'E 11°22'N, ca 900m, 22-30.v.1999, Z. Kejval & M. Trýzna lgt. (NMPC). Paratypes: 7 ♂♂, 8 ♀♀, same data as holotype (ZKDC, 1 specim. each in BMNH, MHNG, MNHN, NHMB, SMNS, DCDC, GUPC). – 1 ♂, Tamil Nadu, 15 km SE of Kotagiri, Kunchappanai env., 76°56'E 11°22'N \ Nilgiri hills, alt. 900 m, 17.-28.xi.1993, D. Boukal & Z. Kejval lgt. (ZKDC).

ETYMOLOGY: Named after Irulas, one of the original tribes inhabiting Nilgiri hills.

DESCRIPTION: Body length 2.6-3.6 mm (holotype 3.4 mm).

MALE (holotype): Head and pronotum rufous brown; elytra largely brown black, with rufous brown base, suture, lateral margins and with very vague indication of paler transverse spot in basal third; legs rufous brown, tarsi slightly paler, antennae and palpi rufous, apical 2-3 antennomeres slightly paler.

Head: 1.2 times as long as wide, evenly rounded posteriorly in dorsal view; posterior temporal angles obsolete. Eyes small to medium-sized, moderately convex. Surface smooth, distinctly but rather sparsely punctured, very glossy; dorsal punctures unevenly spaced, separated mostly by about twice their diameter or sparser. Setation comparatively long and raised, subdecumbent to decumbent, evenly long, with

sparsely scattered erect setae. Antennae rather short, at most moderately exceeding base of pronotum, distinctly enlarged in apical third; antennomere X slightly, 1.1 times, antennomere XI 1.6 times as long as wide.

Thorax: Pronotum as long as wide, as wide as head including eyes, rather widely rounded anteriorly, strongly narrowing posteriad and shallowly impressed postero-laterally before base in dorsal view (not constricted); entire dorsal outline convex in lateral view; pronotal disc evenly shaped, without impressions. Surface conspicuously sculptured dorsally, smooth and glossy only antero-laterally (near procoxal cavities) and dorso-medially before base; dorsal side largely rather coarsely and densely corrugated; postero-lateral impressions coarsely, longitudinally wrinkled, with rather dorso-laterally situated wrinkles passing into dorsal corrugation; dorsal punctation similar to that on head, but mostly obscured by corrugation. Setation as on head, less raised setae rather subdecumbent; about four erect setae on each side antero-laterally more conspicuous and they appear to be articulated on minute protuberances, slightly protruding from lateral outline in dorsal view. Both mesosternum and metasternum simple.

Elytra: 1.7 times as long as wide, strongly convex, narrowed and conjointly rounded apically in dorsal view; humeri entirely obsolete; postscutellar impression absent. Surface smooth, sparsely punctured, very glossy; punctation as coarse as on head but much sparser, interspaces seem to be extremely finely and sparsely punctured. Setation rather evenly long, distinctly longer than on head, mostly suberect, with sparsely scattered, erect setae. Metathoracic wings almost entirely reduced.

Legs: Penultimate tarsomeres rather narrow, with terminal tarsomere articulated before midlength; all legs simple. Setation normally developed, moderately longer and denser on inner side of metatibiae.

Abdomen: Sternum VII (Fig. 22) deeply emarginate posteriorly, with short and wide median process, bearing dense, stiff setae apically. Tergum VII simply rounded posteriorly, its apical margin slightly emarginate medially. Sternite VIII (Fig. 23); paired prongs simple, dorso-ventrally flattened, rather straightly projecting, rounded apically; each prong, excepting fine setation of median margin, with numerous long and thick setae in apical third (about 17 ventrally and 5 dorsally). Tergite VIII (Fig. 24) somewhat truncate posteriorly, its posterior margin moderately sinuous and with several long setae laterally.

Aedeagus (Fig. 25): Apical portion of tegmen 0.6 times as long as basal-piece, nearly parallel-sided, trilobed apically, middle lobe wider, evenly narrowing towards rounded apex, slightly shorter than evenly narrow lateral lobes.

FEMALE: Externally identical with male, except as follows: sternum VII simple, rather evenly rounded posteriorly; tergum VII evenly rounded posteriorly.

VARIABILITY: Slightly variable in colouration and characters of corrugation; paler spots in basal third of elytra mostly quite indistinct; dorsal surface of head in several specimens slightly corrugated mesally and near median margins of eyes; dorsal corrugation of pronotum somewhat variable in its extent, always prominent mesally.

DIFFERENTIAL DIAGNOSIS: *Anthelephila irula* sp. n. differs from the closely related *A. besucheti* by largely the smooth and more distinctly punctured surface of the

head, moderately convex lateral subapical margins and rounded apices of the elytra, male abdominal sternum VII deeply emarginate posteriorly and with a distinct median process (cf. Figs 16, 22), prongs of male sternite VIII longer and narrower, rather straightly projecting (cf. Figs 17, 23), and male tergite VIII somewhat truncate posteriorly, with posterior margin moderately sinuous and longer setose.

DISTRIBUTION: India (Tamil Nadu).

COMMENTS: The specimens were collected near a stream in 1999, in plant debris on a sandy bank and in gaps between large stones.

***Anthelephila kresli* sp. n.**

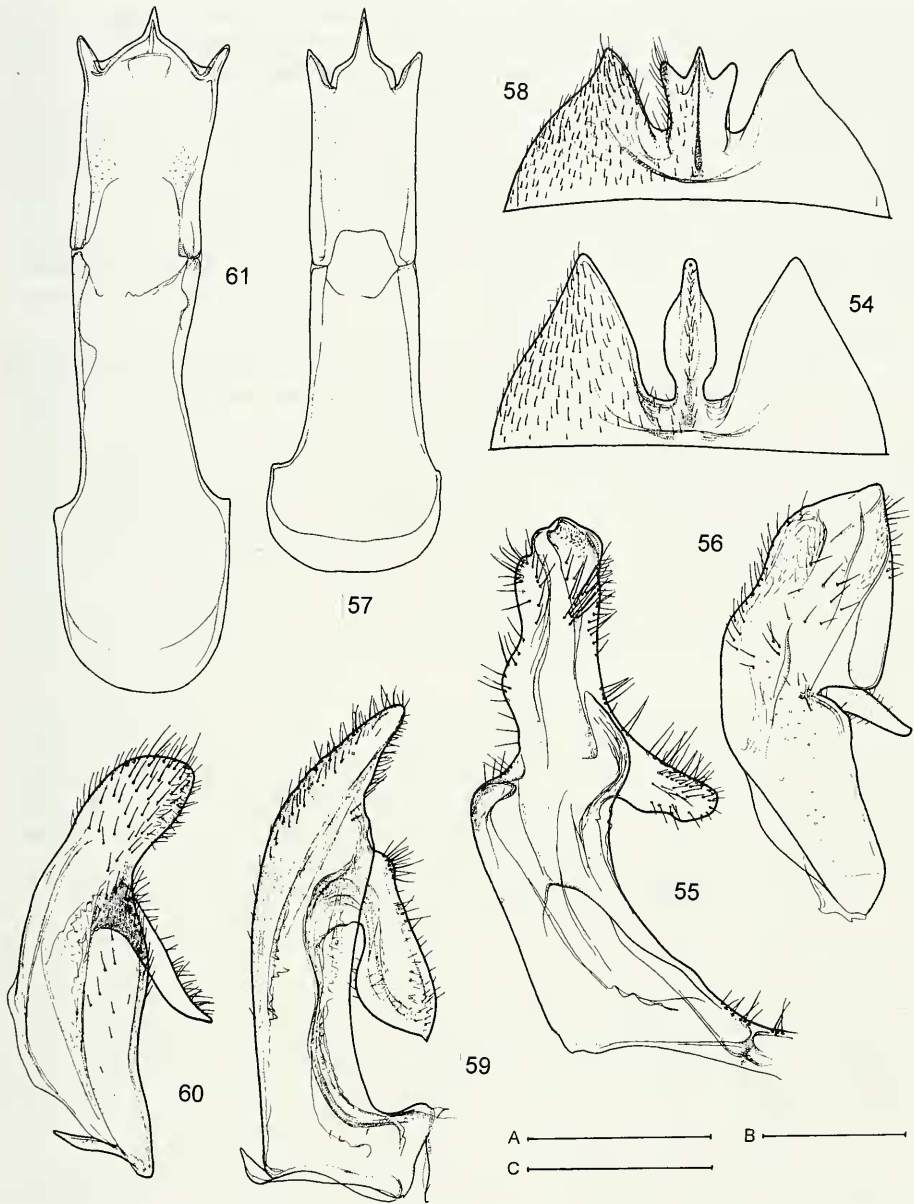
Figs 54-57, 62

TYPE MATERIAL: Holotype ♂, NEPAL, 27.v.1999 Kathmandu, Swayambunath stupa, P. Kresl lgt. (NMPC). – Paratypes: 1 ♂, same data as holotype (ZKDC). – 1 ♂, W-NEPAL, Dhawalagiri Myagdi Distr., Kali-Gandaki Khola, 1100-1400m, Tatopani Probst, 27/28.6.1986 [yellow frame] \ *Anthelephilus punctaticeps* (Pic) det.G.Uhmann 1988 (ZKDC). – 1 ♂, W-NEPAL, Buri Gandaki Macha Khola-Kholabenesi 1650m, 29.5.-4.6. leg. Probst 1990 [yellow frame] \ *Anthelephilus punctaticeps* (Pic) det.G.Uhmann 1990 (ZKDC). – 1 ♀, E-NEPAL, Dhankuta Arun Valley, Lamobagar Gola 27.5.-3.6.1980, 1000-14000 m leg. C. Holzschuh (ZKDC). – 1 ♂, NEPAL-Expeditionen Jochen Martens \ 246 Gorkha Dist., Darondi Khola unterhalb Barpak bis Doreni 1100-900m Waldreste 12Aug83 Martens & Schawaller \ Senckenberg-Museum Frankfurt/Main \ *Anthelephilus punctaticeps* (Pic) det.G.Uhmann 1984 (SMF). – 3 ♂♂, 4 ♀♀, Nepal420 Kathmandu Distr. Kathmandu-Baneshwar 1350 m, 18.IV.1995, Martens & Schawaller \ *Anthelephilus punctaticeps* (Pic) det.G.Uhmann 1996 (SMNS, 1 specim. in GUPC). – 1 ♂, 2 ♀♀, 583 NEPAL: Kathmandu Baneshwar 1300 m, 21.-25.IV.1998 leg. W. Schawaller \ *Anthelephilus punctaticeps* (Pic) det.G.Uhmann 2000 (SMNS). – 1 ♂, Nepal444 Mustang Distr. Kali Gandaki, Dana 1500-1300 m, 14.V.1995 Martens & Schawaller \ *Anthelephilus punctaticeps* (Pic) det.G.Uhmann 1996 (SMNS). – 1 ♀, Nepal447 Myagdi Distr. Mahabhir to Beg Khola 1100-1050 m, 15.V.1995 Martens & Schawaller \ *Anthelephilus punctaticeps* (Pic) det.G.Uhmann 1996 (SMNS). – 1 ♀, Nepal449 Myagdi Distr. Beg Khola village to Bega 1050-1650 m, 16.V.1995 Martens & Schawaller \ *Anthelephilus punctaticeps* (Pic) det.G.Uhmann 1996 (SMNS). – 1 ♀, 210 Dhading Dist., unter Samari Banjang, 1000 - 1300 m, 23 Juli 83, kulturland Martens & Schawaller leg. \ *Anthelephilus punctaticeps* (Pic) det.G.Uhmann 1984 (GUPC). – 2 ♂♂, 1 ♀, NEPAL, Prov. Bagmati Kathmandu, Bagmati nr. Gorkhana Park 27°43'N; 85°20'E 1340 m NN, 17.VI.1999 leg. A. Weigel \ Sammlung Naturkundemuseum Erfurt \ *Anthelephila punctaticeps* (Pic) det. D. Telnov, 2000 (NKME, 1 specim. in ZKDC). – 1 ♂, NEPAL Kathmandu Swayambhunath Templehügel 24.VI.1997 leg. A. Weigel \ *Anthelephilus punctaticeps* (Pic) det. G. Uhmann 1998 (ZKDC). – 1 ♂, NEPAL, Kathmandu, N Bagmati River, 1300 m NN, 06.VI.1995 leg. M. Hartmann \ *Anthelephilus punctaticeps* (Pic) det. G. Uhmann 1996 (NKME). – 1 ♂, NEPAL Kathmandu, N Safaripark, Mauer 06.VI.1995 1300 m Ü.NN leg. A. Weigel \ *Anthelephilus punctaticeps* (Pic) det. G. Uhmann 1996 (NKME). – 1 ♀, NEPAL oc. 1300 m Kathmandu NW, Balaju Vishnumati River, 17.VI.1999 leg. A. Weigel \ Sammlung Naturkundemuseum Erfurt \ *Anthelephila punctaticeps* (Pic) det. D. Telnov, 2000 (NKME). – 1 ♂, Indien Darjeeling D. Bhakta B. \ Pedong 23-28.III.87 \ *Anthelephila punctaticeps* Pic det. D. Telnov, 1999 (NHMB).

ETYMOLOGY: Dedicated to Petr Kresl (Spùle, Czech Republic), collector of the holotype.

DESCRIPTION: Body length 3.7-4.6 mm (holotype 4.0 mm).

MALE (holotype): Head brown black; pronotum largely dark rufous brown, distinctly darkened, nearly brown black with slight rufous tinge dorsally; elytra dark brown to brown black, with rufous brown base, lateral margins, and with indication of two pairs of vague, narrow, paler bands (their location identical with that of the setose



Figs 54-61

Anthelephila kresli sp. n., male: (54) sternum VII. (55) sternite VIII. (56) prong of sternite VIII, lateral view. (57) tegmen. *A. lobulicula* sp. n., male: (58) sternum VII. (59) sternite VIII. (60) prong of sternite VIII, lateral view. (61) tegmen. Scale (0.2 mm): A – Figs 55, 59, 61, B – Figs 56, 57, 60; (0.5 mm): C – Figs 54, 58.

bands, see below); antennae rufous brown basally, becoming darker, brown black in apical third, palpi brown black; legs largely brown black, basal narrowed portion of femora rather contrastingly yellowish to pale rufous, tarsi rufous brown.

Head: 1.2 times as long as wide, somewhat unevenly rounded posteriorly, with base slightly produced medially in dorsal view; posterior temporal angles entirely obsolete. Surface smooth, conspicuously punctured, glossy; dorsal punctures rather coarse, unevenly spaced, separated mostly by about their diameter, at places denser, sparser posteriorly. Setation fine, mostly subdecumbent, with sparsely scattered, somewhat longer, erect setae. Eyes small, rather convex. Antennae moderately exceeding base of pronotum, weakly enlarged in apical third; antennomere X 1.4 times, antennomere XI 2.2 times as long as wide.

Thorax: Pronotum 1.3 times as long as wide, moderately narrower than head including eyes, evenly rounded anteriorly, distinctly narrowing posteriad and rather shallowly impressed postero-laterally in dorsal view; entire dorsal outline convex in lateral view; pronotal disc with very slight indication of shallow, median longitudinal impression in anterior third. Surface smooth, conspicuously punctured, glossy, postero-lateral impression at most very shortly, inconspicuously wrinkled; punctation as on head, rather evenly coarse, covering the whole surface (including lateral sides), somewhat sparser laterally, near procoxal cavities, and postero-dorsally. Setation as on head, erect longer setae more numerous. Mesosternum simple. Metasternum with a pair of distinct, apically setose protuberances postero-medially, near median margin of metacoxae.

Elytra: 1.7 times as long as wide, strongly convex, subtruncate apically, with elytral apices separately rounded; humeri entirely obsolete; postscutellar impression absent. Surface smooth, distinctly punctured, glossy; punctation uneven, ordinary punctures generally much finer and mostly sparser than on head, especially in apical third; additionally with densely spaced, nearly contiguous punctures, forming two paired bands, touching neither lateral margins nor suture; anterior bands situated in basal third, narrow to interrupted, more oblique, directing postero-mediad from lateral sides, posterior bands situated shortly behind mid-length, more conspicuous, wider, narrowing towards suture, transverse to slightly oblique antero-mediad from lateral sides. Setation mostly as short as on head, subdecumbent, with scattered, long, erect setae (somewhat longer than erect setae of head); setation mostly pale, setae of dense punctures contrastingly whitish, thicker, nearly appressed, forming distinct setose bands, some whitish, more raised setae scattered near base. Metathoracic wings almost entirely reduced.

Legs: Rather robust; penultimate tarsomeres narrow, terminal tarsomere rather subapical in metatarsi; metatibiae somewhat uneven on inner side just beyond mid-length. Setation normally developed.

Abdomen: Sternum VII (Fig. 54) with posterior margin very deeply emarginate and with conspicuous median process, about as long as lateral lobes of emargination; median process wide, laterally flattened, with rounded dorsal and sharper ventral longitudinal edge, its apex curved ventrad and bluntly pointed. Tergum VII subtruncate posteriorly, with rounded postero-lateral angles, and shallowly impressed subapically. Sternite VIII (Figs 55, 56); paired prongs robust, strongly widened in distal half in

lateral view, with conspicuous, long and wide, flattened process ventro-medially at about mid-length, surface of prongs uneven, variously buckled, their lateral sides with several gibbosities in dorsal view. Tergite VIII (Fig. 62) nearly parallel-sided in dorsal view, distinctly, widely emarginate posteriorly, its postero-ventral side somewhat produced and exceeding median part of emargination in dorsal view; rounded lateral lobes of emargination long and rather densely setose.

Aedeagus (Fig. 57): Apical portion of tegmen 0.8 times as long as basal-piece, parallel-sided, trilobed apically, middle lobe wide basally, abruptly narrowed, elongated and rather sharply pointed apically, much exceeding narrower and bluntly pointed lateral lobes.

FEMALE: Externally identical with male, except as follows: metasternum simple, lacking paired protrusions; metatibiae narrower and rather straight; sternum VII simple, evenly rounded posteriorly; tergum VII evenly rounded posteriorly, shallowly impressed and with short, median longitudinal edge subapically.

VARIABILITY: Rather variable in colouration; some specimens darker coloured with both pale bands of elytra indistinct, in contrast other specimens paler coloured as follows: both head and pronotum dark rufous brown, elytra with basal third (as far as anterior band), both lateral margins and suture, and posterior transverse bands rufous brown, legs brown, nearly basal half of antennae rufous brown. The paratype from Dhankuta district (ZKDC) with rounded, but protruding elytral humeri and well developed metathoracic wings.

DIFFERENTIAL DIAGNOSIS: *Anthelephila kresli* sp. n. is related to *A. lobulicula* and *A. sculpta* spp. n., as suggested by the similar form of male sternite VIII (paired prongs with large process ventro-medially). It differs from *A. lobulicula* sp. n. by its robust appearance, wider and coarsely punctured pronotum, simple (not trilobed) apex of the median process of male sternum VII, and by numerous details in morphology of the male sternite and tergite VIII (cf. Figs 55, 56 and 59, 60). See the differential diagnosis of the latter species and the key for its separation from *A. sculpta* sp. n.

DISTRIBUTION: Nepal, India (West Bengal).

***Anthelephila lobulicula* sp. n.**

Figs 58-61, 63

TYPE MATERIAL: Holotype ♂, NEPAL-Expeditionen Jochen Martens \ 344 Taplejung Distr., confluence of Kabeli Khola and Tada Khola, 1000-1000 m, mixed broad-leaved forest, 23.-25.Apr 88 Martens & Schawaller \ *Anthelephilus punctaticeps* (Pic) det.G.Uhmann1989 (SMNS).

ETYMOLOGY: Composed from Latin *lobulus* (small lobe) and *culus* (posterior, abdomen); named in reference to the form of male abdominal sternum VII.

DESCRIPTION: Body length 3.6 mm.

MALE (holotype): Head and pronotum black; elytra black, with brownish base and brownish tinge in apical third; antennae and palpi brown black, basal antennomeres rufous brown; legs largely brown black to black, basal narrowed portion of meso- and metafemora pale yellowish, tarsi rufous brown.

Head: 1.1 times as long as wide, somewhat unevenly rounded posteriorly, with base slightly produced medially; posterior temporal angles entirely obsolete. Surface

smooth, glossy, distinctly punctured, with some shallow wrinkles anteriorly on frons; dorsal punctation uneven, punctures mostly coarse, separated by about their diameter, finer and more widely spaced near base. Setation mostly rather short, subdecumbent, with sparsely scattered, slightly longer, erect setae. Eyes small, moderately convex. Antennae moderately exceeding base of pronotum, only slightly enlarged in apical third; antennomere X 1.3 times, antennomere XI 2.1 times as long as wide.

Thorax: Pronotum 1.7 times as long as wide, distinctly narrower than head including eyes, evenly rounded anteriorly, distinctly narrowing posteriad and rather sharply impressed postero-laterally in dorsal view; entire dorsal outline convex in lateral view, strongly convex before midlength; pronotal disc with weak median longitudinal impression at about midlength. Surface smooth, glossy, somewhat less distinctly punctured, postero-lateral impressions finely wrinkled; dorsal punctation much finer and sparser than on head. Setation as on head. Mesosternum simple. Metasternum with a pair of distinct, apically setose protrusions postero-medially, near median margin of metacoxae.

Elytra: 1.7 times as long as wide, convex, truncate apically; humeri entirely obsolete; postscutellar impression absent. Surface smooth, glossy, less distinctly punctured; punctures generally nearly as fine as on pronotum, unevenly spaced, mostly sparser than on head and pronotum; additionally with very densely spaced, nearly contiguous punctures, forming paired bands/patches, touching neither lateral margins nor suture; anterior band composed more likely of two small, narrowly connected patches of dense punctures, situated in basal third, directed obliquely postero-medial from lateral sides, posterior band situated shortly behind mid-length, more conspicuous, with small patch of dense punctures, narrowly separated medially. Setation rather evenly long, moderately longer than on head, mostly decumbent to suberect, with sparsely scattered, erect setae; setation mostly fine and pale, setae of dense punctures contrastingly whitish, thicker, subdecumbent to appressed, forming distinct setose bands. Metathoracic wings almost entirely reduced.

Legs: Penultimate tarsomeres rather narrow, terminal tarsomere rather subapical in metatarsi; all legs simple. Setation normally developed.

Abdomen: Sternum VII (Fig. 58) with posterior margin very deeply emarginate and with conspicuous median process, about as long as lateral lobes of emargination; median process wide, distinctly trilobed apically, its ventral side over the whole length with keel-like median edge. Tergum VII rounded posteriorly, its apical margin slightly emarginate medially. Sternite VIII (Figs 59, 60); paired prongs robust, moderately arcuate in dorsal view, with conspicuous, flattened, fin-like process ventro-medially at about mid-length, apical portion of prongs simple, rounded apically, rather evenly setose. Tergite VIII (Fig. 63) nearly parallel-sided, subtruncate and moderately emarginate posteriorly, with postero-ventral margin somewhat produced.

Aedeagus (Fig. 61): Apical portion of tegmen 0.6 times as long as basal piece, nearly parallel-sided, trilobed apically, middle lobe conspicuously wide basally, strongly narrowed, elongated and sharply pointed apically, moderately exceeding narrow, apically rounded and moderately divergent lateral lobes.

FEMALE: Unknown.

DIFFERENTIAL DIAGNOSIS: *Anthelephila lobulicula* sp. n. shares the similar general form of male sternite VIII with *A. kresli* and *A. sculpta* spp. n., but differs by the slender appearance, less distinct punctation of the pronotum (dorsal punctures much finer than those on head), and in the male characters.

DISTRIBUTION: Nepal.

Anthelephila ovipennis (Bonadona, 1984)

Figs 30-33, 35-37

Formicomus (*Anthelephilus*) *ovipennis* Bonadona, 1984: 486, figs 23, 28-30.

TYPE MATERIAL (not examined): Holotype, ♂, CONGO: Belin \ *Anthelephilus ovipennis* (coll. Pic, MNHN). – Paratypes: 4 specim., Kivu, territoire Uvira, Mulenge, 2010 m, vestige de forêt ombrophile, récolté dans lhumus, V.1951 (N. Leleup leg.) \ *A. ovipennis* Pic (coll. Pic, MNHN). – 2 specim., Kivu: Tshibinda, XI.1932 (L. Burgeon leg.) \ *Formicomus* près subfasciatus \ *Anthelephilus ovipennis* (coll. Pic, MNHN).

OTHER MATERIAL EXAMINED: 1 ♂, ZAIRE, Kivu, Irangi, 800 m, 22.ii.1985, H. Mühle leg. (ZKDC). – 4 ♂♂, 1 ♀, RUANDA, Pref. Cyangugu, Nyakabuye env., 17.ii.1985, H. Mühle leg. (GUPC, ZKDC). – 3 ♂♂, 5 ♀♀, same locality, but different dates: 12.-19.vii.1984, 28.xi.1984, 22.iii.1985, 3.x.1985 or 19.xii.1985 (GUPC, ZKDC).

REDESCRIPTION: Body length 3.2-4.1 mm.

MALE (Ruanda, ZKDC): Mesosternum simple; metasternum with a pair of robust, apically setose protrusions postero-medially, near median margin of metacoxae. Metatibiae rather stout distally, with small patch/tuft of short, thicker, yellowish rufous, laterad pointing setae and numerous long, finer, pale setae on inner side subapically (Fig. 36); basal protarsomere enlarged, rather long and wide. Sternum VII (Fig. 30) moderately emarginate posteriorly and with small, bluntly pointed median process, bearing several longer setae apically; dorsal side of median process with short longitudinal edge. Tergum VII evenly rounded posteriorly. Sternite VIII (Figs 31, 32); prongs wide, strongly narrowed in apical third in dorsal view, their apex somewhat obliquely truncate and pointed; ventral side of prongs with longitudinal, distally abruptly shortened slat/lobe, its outer edge finely denticulated and terminating distally in robust, pointed process; setation less conspicuous, rather fine and sparse, with scattered longer setae laterally and apically. Tergite VIII simple, arcuate, evenly rounded posteriorly. Aedeagus (Fig. 33); apical portion of tegmen 0.6 times as long as basal-piece, parallel-sided, trilobed apically; middle lobe wide basally, strongly narrowed at about midlength, elongated and pointed apically, exceeding narrow, apically rounded, lateral lobes.

FEMALE (Ruanda, ZKDC): Externally identical with male, except as follows: metasternum simple, lacking paired protrusions; basal protarsomere smaller, narrow; metafemora narrower distally, uniformly simply setose; sternum VII simple, somewhat unevenly rounded posteriorly, and with a tuft of long, stiff setae apically; tergum VII subtriangular, rounded and with longer, dense stiff setae apically (Fig. 37).

DIFFERENTIAL DIAGNOSIS: *Anthelephila ovipennis* is closely related to *A. congoana*, as suggested especially by the very similar form of the prongs of male sternite VIII, but differs by the head being rather evenly rounded posteriorly, the male metatibiae subapically with a small patch of short, dense, yellowish rufous setae on

inner side, male sternum VII shallowly emarginate posteriorly and with a small, bluntly pointed median process, male tergite VIII evenly rounded apically, female tergum VII rather rounded apically, as well as by some details in morphology of male sternite VIII and the tegmen.

DISTRIBUTION: Zaire, Ruanda, Uganda.

COMMENTS. As stated by Bonadona (1984), he found the types of *Formicomus ovipennis* in the collection of Maurice Pic (MNHN) and described this species using a Pic's manuscript name.

***Anthelephila sculpta* sp. n.**

Figs 4, 64-68

TYPE MATERIAL: Holotype ♂, INDIA Meghalaya Khasi Hills 5.XI. Nongpoh 700m Besuchet-Löbl 78 [1978; p] \ *Anthelephilus punctaticeps* (Pic) det.G.Uhmann 1986 (MHNG). – Paratypes: 5 ♂♂, 5 ♀♀, same data as holotype (6 specim. in MHNG, 4 specim. in ZKDC). – 1 ♂, 1 ♀, INDIA Assam Manas 200m 23.X.78 Besuchet-Löbl [p] \ *Anthelephilus punctaticeps* (Pic) det.G.Uhmann 1986 (MHNG, GUPC). – 1 ♂, same data, except: 22.X.78 (GUPC). – 1 ♂, INDIA W. Bengal Darjeeling dist. Teesta 250m 10.X.1978 Besuchet Löbl \ *Anthelephilus punctaticeps* (Pic) det.G.Uhmann 1986 (MHNG). – 1 ♂, BHUTAN 1981 Bhakta B. \ Phuntsholing 2/400 m 3.IX. \ *Anthelephila punctaticeps* Pic det. D. Telnov, 1999 (NHMB).

ETYMOLOGY: From Latin *sculptilis* (carved, sculptured); named in reference to the coarse sculpture of the head and pronotum.

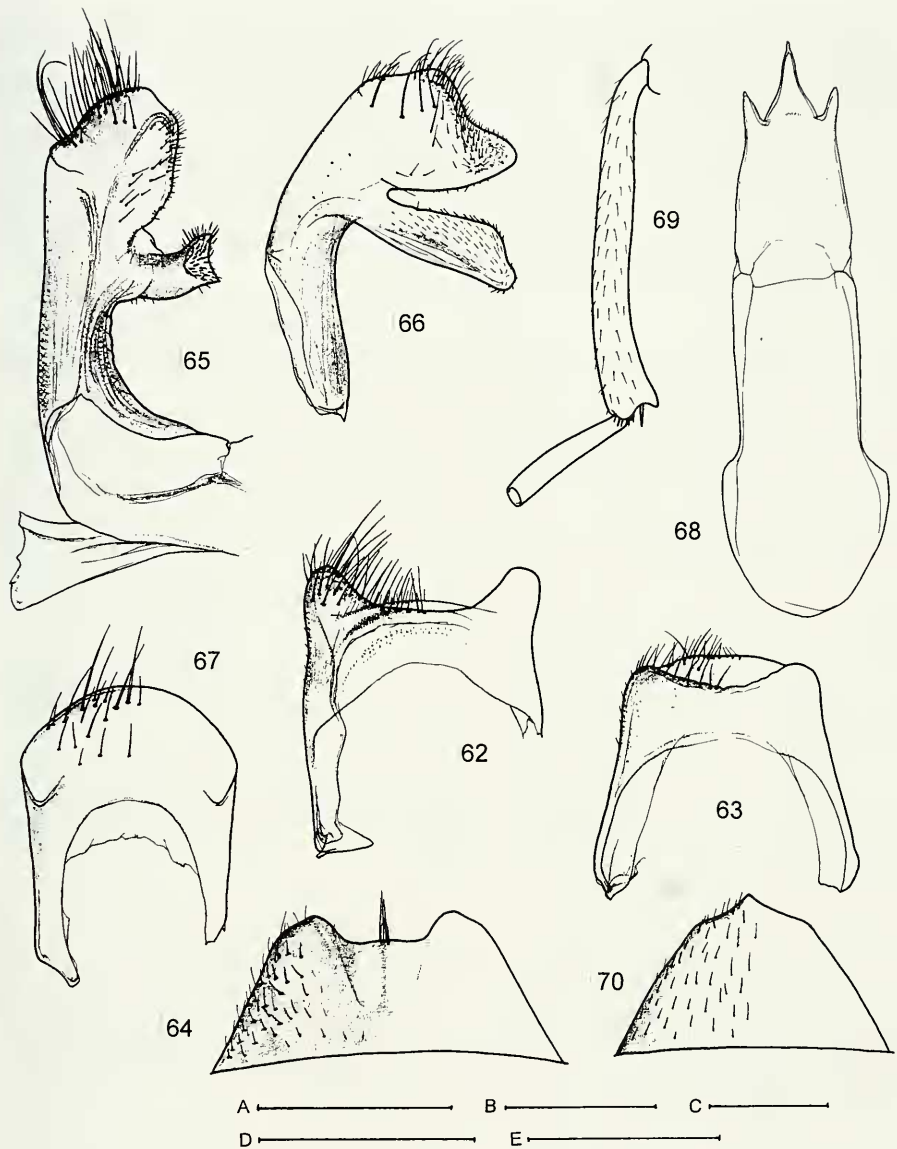
DESCRIPTION: Body length 3.9-4.3 mm.

MALE (holotype): Head and pronotum rufous brown; elytra dark rufous brown, with vague indication of two narrow, paler bands (their location identical with that of setose bands, see below); antennae and palpi rufous; legs brown with rufous tinge, basal narrowed portion of femora pale rufous, tarsi rufous brown.

Head: 1.2 times as long as wide, somewhat unevenly rounded posteriorly, with base slightly produced medially in dorsal view; posterior temporal angles entirely obsolete. Surface less glossy, very coarsely and rather evenly sculptured, including ventral side; punctures situated in deep, pit-like impressions, dorsal impressions narrowly separated, at places nearly contiguous. Setation moderately long, subdecumbent to decumbent, with few distinctly longer, erect setae. Eyes small, rather convex. Antennae rather short, slightly exceeding base of pronotum, moderately enlarged in apical third; antennomere X 1.2 times, antennomere XI 1.9 times as long as wide.

Thorax: Pronotum 1.3 times as long as wide, only slightly narrower than head including eyes, regularly rounded anteriorly, distinctly narrowed and shallowly impressed postero-laterally in dorsal view; entire dorsal outline convex in lateral view; pronotal disc with very slight indication of median longitudinal impression close before midlength (obscured by coarse sculpture). Surface characters as on head, pit-like impressions rather evenly covering the whole surface, including unwrinkled postero-lateral impressions. Setation as on head, long erect setae somewhat more numerous. Mesosternum simple. Metasternum with a pair of distinctly protruding, apically setose protrusions postero-medially, near median margin of metacoxae.

Elytra: 1.7 times as long as wide, strongly convex, narrowed, subtruncate to nearly conjointly rounded apically in dorsal view; humeri entirely obsolete; post-



FIGS 62-70

Male tergite VIII: (62) *Anthelephila kresli* sp. n. (63) *A. lobulicula* sp. n. *A. sculpta* sp. n., male: (64) sternum VII. (65) sternite VIII. (66) prong of sternite VIII, lateral view. (67) tergite VIII. *A. subtruncata* (Pic), male: (69) metatibia. (70) sternum VII. Scale (0.2 mm): A - Fig. 65, B - Figs 66, 68, C - Figs 62-64, 67; (0.5 mm): D - Fig. 70, E - Fig. 69.

scutellar impression absent. Surface smooth, glossy, distinctly punctured; punctuation uneven, ordinary punctures rather coarse, sparse in basal half, becoming finer and even sparser posteriad; additionally with densely spaced, nearly contiguous punctures,

forming paired, transverse to moderately oblique bands/patches; anterior band composed more likely of two separated patches of dense punctures, situated in basal third, posterior band situated shortly behind mid-length, more conspicuous, with small, narrowly separated patch of dense punctures antero-medially. Setation mostly distinctly longer than on head, decumbent to suberect, with sparsely scattered, erect setae; ordinary setae fine and pale, setae of dense punctures contrastingly whitish, thicker and blunt, nearly appressed, forming distinct setose bands (Fig. 4), some whitish setae scattered also along suture in basal and apical third and between setose bands laterally. Metathoracic wings almost entirely reduced.

Legs: Robust; penultimate tarsomere rather narrow, terminal tarsomere sub-apical in metatarsi; metatibiae somewhat swollen, with longitudinal, strongly protruding ridge on inner side in distal half. Setation rather more distinct, metatibiae conspicuously long setose.

Abdomen: Sternum VII (Fig. 64) with posterior margin distinctly emarginate and with small tuft of longer setae medially. Tergum VII evenly rounded posteriorly. Sternite VIII (Figs 65, 66); paired prongs rather robust, laterally flattened in distal half, with conspicuous, long and wide, flattened process ventrally close behind midlength; surface of prongs largely bare, densely setose and with numerous long setae in apical portion, median side of ventral process densely short setose. Tergite VIII (Fig. 67) simple, its posterior margin somewhat unevenly rounded, with slight lateral angle, with some longer setae scattered postero-medially.

Aedeagus (Fig. 68): Apical portion of tegmen 0.7 times as long as basal-piece, moderately narrowed and trilobed apically, middle lobe wide basally, nearly evenly narrowing towards pointed apex, much exceeding short lateral lobes.

FEMALE: Externally identical with male, except as follows: metasternum simple, lacking paired protrusions; metatibiae lacking longitudinal inner ridge; sternum VII simple, evenly rounded posteriorly; tergum VII flattened to shallowly impressed and with short, median longitudinal edge subapically.

DIFFERENTIAL DIAGNOSIS: *Anthelephila sculpta* sp. n. appears to be related to *A. kresli* sp. n. and *A. lobulicula* sp. n., as suggested by the similar general form of male sternite VIII (prongs with large process ventro-medially). It can be easily recognized by the coarse sculpture of the head and pronotum, male metatibia with longitudinal inner ridge, male sternum VII less deeply emarginate posteriorly and lacking median process, and by numerous details in other male characters.

DISTRIBUTION: India (Meghalaya, West Bengal, Assam), Bhutan.

Anthelephila subtruncata (Pic, 1899)

Figs 69-74

Formicomus (Anthelephilus) subtruncatus Pic, 1899: 105.

TYPE MATERIAL: Syntypes: 1 ♀, type [h; yellowish label] \ Type [p; red label] \ Museum Paris Coll. M.Pic [p; blue label] \ F. subtruncatus Pic [new label, not Pic's handwriting] (MNHN). – 1 ♂, [h; illegible] \ Af aus.^{1e} [h; = Afrique australe, see Comments] \ Museum Paris Coll. M. Pic [p; blue label] (MNHN).

OTHER MATERIAL EXAMINED: 1 ♂, 3 ♀♀, South Africa, N of Port Elizabeth, Dunbrody, 8.i. 6.ii. or 10.ii.1903 (coll. Pic, MNHN; BMNH). – 1 ♀ [nearly completely damaged], South Africa, S of Grahamstown, Boknes, 10.i.1948, J. C. vanHille leg. (coll. Pic, MNHN). – 1 ♂,

2 ♀♀, South Africa, Cape Prov., Somerset East, 23.-31.xii.1930, R. E. Turner leg. (BMNH, 1 specim. in ZKDC). – 2 ♀♀, same data, except: x.1930 (BMNH). – 1 ♀, South Africa, East Cape Prov., Katberg, xii.1932, R. E. Turner leg. (BMNH). – 2 ♂♂, South Africa, East Cape Prov., Kasouga, 30.x.1977, J. C. vanHille leg. (DCDC). – 1 ♀, South Africa, Eastern Cape, Alexandria-Woody Cape, 10.-13.xii.1997, I. Jeniš leg. (ZKDC). – 1 ♀, South Africa, Eastern Cape Prov., Woodi Cape Nat. Reserve near Alexandria, 28.xi.-1.xii.2000, S. Bečvář leg. (ADBC). – 3 ♂♂, 10 ♀♀, South Africa, E Cape Prov., Grahamstown, 19.v.1946, W. E. Collett leg. (AMGS). – 1 ♀, same locality, 12.iii.1953, H. D. Brown leg. (AMGS). – 1 ♂, 2 ♀♀, South Africa, E Cape Prov., Hogsback, xii.1959, J. C. van Hille leg. (AMGS, ZKDC). – 1 ♂, 2 ♀♀, same locality, 30.ix.1947, E. Rogers leg. (AMGS). – 1 ♀, South Africa, E Cape Prov., Kasouga, i.1940 (AMGS). – 1 ♂, South Africa, E. Cape Prov., Dunbrody, x.1902, J. O'Neil leg. (AMGS). – 2 ♂♂, South Africa, E Cape Prov., Keurboons river, iv.1944, Bester & Collett leg. (AMGS).

REDESCRIPTION: Body length 2.9-3.9 mm.

MALE (syntype): Dark brown to brown black, nearly unicoloured.

Head. 1.2 times as long as wide, somewhat unevenly, slightly widely rounded posteriorly in dorsal view; temporal angles indistinct, entirely rounded. Surface with fine, dense microsculpture and thus less glossy, somewhat uneven in anterior half on frons, distinctly punctured; dorsal punctures unevenly spaced, separated mostly by about twice their diameter. Setation short, mostly subdecumbent to appressed, with few short, erect setae. Eyes small, at most moderately convex. Antennae distinctly exceeding base of pronotum, moderately enlarged in apical third; antennomere X 1.2 times and antennomere XI 1.9 times as long as wide.

Thorax: Pronotum 1.2 times as long as wide, moderately narrower than head including eyes, nearly evenly rounded anteriorly, strongly narrowing posteriorly and distinctly, rather sharply impressed postero-laterally (constricted) in dorsal view; entire dorsal outline of pronotum convex in lateral view; pronotal disc with indication of median longitudinal impression/furrow in anterior half and posteriorly before base. Surface with dense microsculpture and thus less glossy, similarly as in head, in addition uneven, longitudinally corrugated postero-dorsally; bottom of postero-lateral impressions microsculptured (without coarse wrinkles) and adjacent basal area distinctly punctured; dorsal punctation similar to that on head. Setation as on head. Mesosternum simple. Metasternum with a pair of conspicuously projecting, apically pointed protrusions postero-medially, near median margin of metacoxae.

Elytra: 1.6 times as long as wide, strongly convex, narrowed and subtruncate apically; humeri entirely obsolete; postscutellar impression absent. Surface smooth, distinctly punctured, glossy; punctation mostly sparser and finer than on head, especially in apical third, at places moderately denser (posterior setose band, see below). Setation similar to that on head, at most slightly longer, appressed, with scattered short erect setae, mostly pale, some appressed setae whitish and thicker, forming two vague, transverse bands, situated in basal third and shortly behind midlength of elytra, some whitish setae scattered also laterally and near base. Metathoracic wings strongly reduced.

Legs: Penultimate tarsomeres rather narrow, terminal tarsomere subapical in metatarsi; mesofemora slightly dilated on inner side subapically (Fig. 71); mesotibiae slightly bent and rather stout; metatibiae enlarged and curved distally, with inner apical margin projecting into blunt process, with single apical spine (Fig. 69). Setation mostly normally developed; mesofemora and mesotibiae on inner side with numerous, conspicuously long, raised setae (Fig. 71).

Abdomen: Sternum VII (Fig. 70) nearly simple, triangular and apically pointed posteriorly. Tergum VII evenly rounded posteriorly. Sternite VIII (Figs 72, 73); paired prongs simple, wide, strongly narrowed and moderately converging apically in dorsal view, their apex curved ventrad and with robust dent-like process on ventral side subapically; setation of prongs rather short and scattered, inconspicuous. Tergite VIII simple, with posterior margin rounded and slightly emarginate medially.

Aedeagus (Fig. 74): Apical portion of tegmen 0.6 times as long as basal-piece, trilobed apically, apical lobes nearly identical, wide basally and nearly evenly narrowing towards blunt apex.

FEMALE: Externally identical with male, except as follows: metasternum simple, lacking paired protrusions; middle legs simple, uniformly short setose; metatibiae narrow, simple, lacking subapical process, and with two apical spines; sternum VII with posterior margin evenly rounded apically.

VARIABILITY: Some specimens from Somerset East with head more distinctly wider than pronotum, surface of pronotum more glossy, unwrinkled postero-dorsally, with fine corrugation indistinct, and with dorsal, median longitudinal impression of pronotum either rather distinctly or only slightly indicated anteriorly behind collar.

DIFFERENTIAL DIAGNOSIS: Of the related Afrotropical species, *Anthelephila subtruncata* resembles especially *A. vanhillei* sp. n. by its dark colouration and by the head somewhat widely rounded posteriorly. It can be distinguished from this species by form of the pronotum and by a number of clear differences in male characters (see the differential diagnosis of the latter species and key).

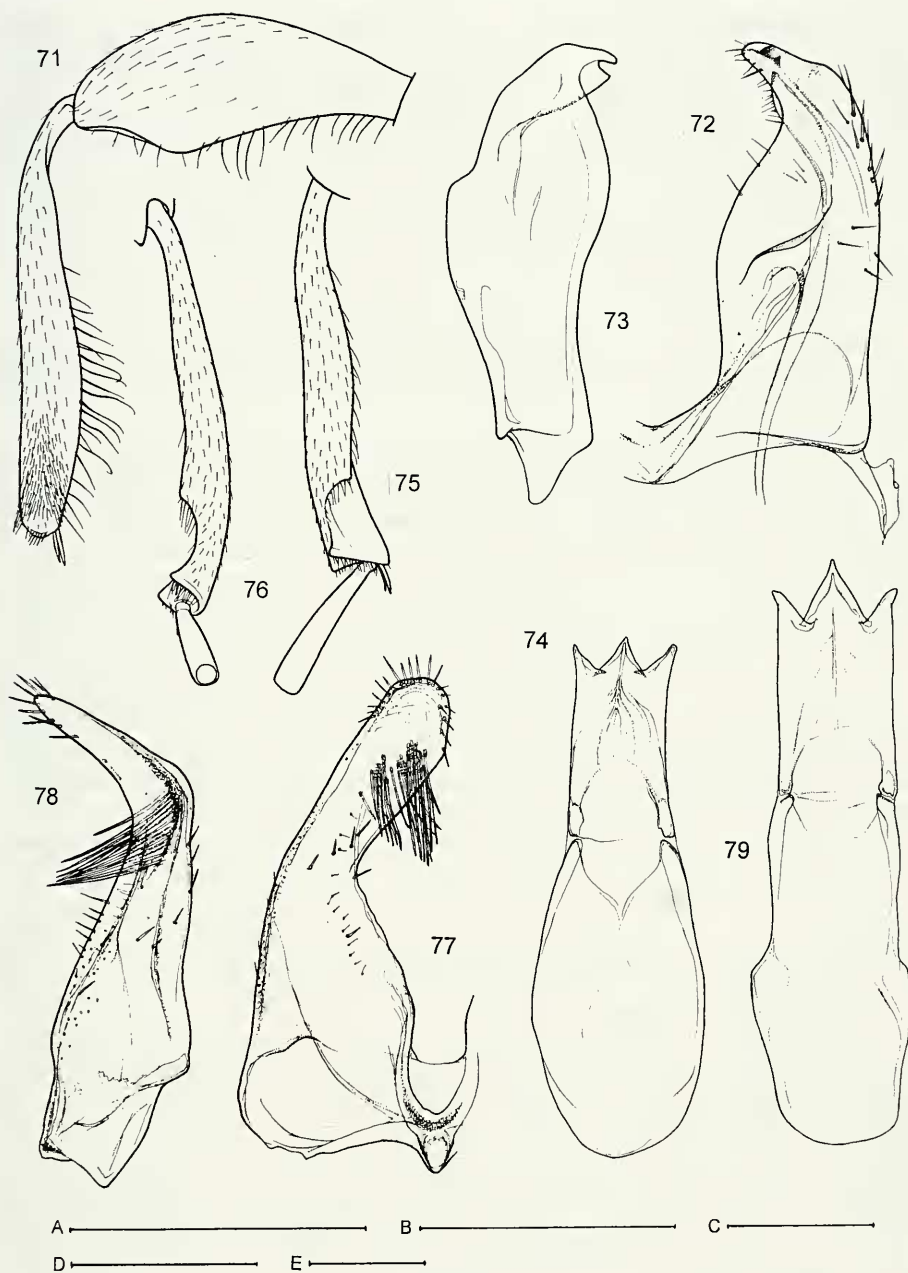
DISTRIBUTION: South Africa (Eastern Cape Prov.).

COMMENTS: Pic (1899) described *Formicomus subtruncatus* based on specimens collected in southern Africa ("Afrique australe") and provided to him by M. H. Donckier. The record from Cape Province by Hille (1961) is based on the type specimens of *A. vanhillei* sp. n. The record from Uganda by Uhmman (1990b) is dubious and very probably is based on a misidentification.

Anthelephila vanhillei sp. n.

Figs 5, 75-79

TYPE MATERIAL: Holotype ♂, S.Afr., S.W. Cape Arniston, dunes 34.39 S - 20.13 E \ 29.8.1983; E-Y:1996 coastal dunes, day leg, Endrödy, Penrith (TMP). - Paratypes: 11 ♂♂, 12 ♀♀, same data as holotype (TMP, 4 specim. in ZKDC). - 1 ♀♀, same data as holotype except: "Arniston, inland" and "E-Y:1994 groundtraps. 59 days" (TMP). - 6 ♂♂, 9 ♀♀, S.Afr., S.W. Cape Struisbaai 34.46 S - 20.03 E \ 28.8.1983; E-Y: 1989 groundtraps, 60 days leg. Endrödy, Penrith \ groundtrap with banana [or meat or faeces] bait (TMP, 2 specim. in ZKDC). - 1 ♀, S.Afr., S.W.Cape Gansbaai, 10 km NE 34.31 S - 19.25 E \ 27.8.1983; E-Y: 1983 groundtraps, 63 days leg. Endrödy, Penrith \ groundtrap with faeces bait (TMP). - 1 ♀, S.Afr., S.W.Cape Stanford, 13 km S. 34.40 S - 19.26 E \ 27.8.1983; E-Y: 1982 under stones, carc. leg. Endrödy, Penrith (TMP). - 2 ♂♂, 3 ♀♀, SOUTH AFRICA Eastern Cape Alexandria - Woody Cape 10 - 13.12.1997 Ivo Jeniš leg. (ZKDC). - 7 ♂♂, 6 ♀♀, S. Afr. Cape Prov. De Hoop Vlei. 20 miles E Bredasdorp 2.I.51. No. 107 \ Swedish South Africa Expedition 1950-1951 Brinck-Rudebeck \ *Formicomus subtruncatus* Pic det. J.C.vanHille Oct. 1960 [three ♀♀ in addition with sex-mark label] (ZILS). - 1 ♂, S. Afr. Cape Prov. Mosselbaai 8-9.I.51 No. 127 \ Swedish South Africa Expedition 1950-1951 Brinck-Rudebeck \ *Formicomus subtruncatus* Pic det. J.C.vanHille Oct. 1960 (ZILS). - 1 ♂, Cape Province: Mossel Bay, Dec. 1934 [p] \ S.AFRICA: R.E. Turner.



Figs 71-79

Anthelephila subtruncata (Pic), male: (71) mesofemur with tibia. (72) sternite VIII (half). (73) prong of sternite VIII (outline), lateral view. (74) tegmen. *A. vanhillei* sp. n., male: (75, 76) mesotibia, different views. (77) sternum VII. (78) prong of sternite VIII, lateral view. (79) tegmen. Scale (0.2 mm): A - Figs 77, 78, B - Figs 72, 73, C - Fig. 74, D - Fig. 79, E - Figs 71, 75, 76.

B.M. 1935-73. [p; with blue line] \ *Formicomus subtruncatus* Pic det. J.C. van Hille [h] (BMNH). – 1 ♀, Cape Province. Mossel bay. August 1932. [p] \ S. Africa R.E. Turner. Brit. Mus. 1932-421. [p; with blue line] \ on ... B. M [h; partly illegible] \ *Formicomus subtruncatus* Pic det. J.C. van Hille [h] (BMNH). – 3 ♂♂, 1 ♀, Sedgefield 14 Dec. 1977 J. C. van Hille \ *Formicomus subtruncatus* Pic det. J.C. v. Hille (GUPC, 1 ♂ ZKDC). – 3 ♂♂, 2 ♀♀, Boknes 8-I-1947 J. C. van Hille \ Entomology Dept. Albany Museum Somerset Street Grahamstown 6139 \ *Formicomus subtruncatus* Pic det. J. C. v. Hille (AMGS). – 1 ♂, 3 ♀♀, same data, except: 10-I-1948 (AMGS).

ETYMOLOGY: Named in honour of the late J. C. van Hille, well known specialist in the Afrotropical Anthicidae.

DESCRIPTION: Body length 3.2-3.9 mm (holotype 3.8 mm).

MALE (holotype): Body brown black, nearly unicoloured; legs dark brown to brown black; antennae brown black, basal 2-3 antennomeres partly at most slightly paler; palpi brown black.

Head: 1.2 times as long as wide, rather widely rounded posteriorly in dorsal view (Fig. 5); posterior temporal angles rounded. Surface with fine, dense microsculpture and thus less glossy, distinctly punctured; dorsal punctures separated mostly by about twice their diameter. Setation short, appressed to subdecumbent, with few short, inconspicuous erect setae. Eyes small, at most moderately convex. Antennae distinctly exceeding base of pronotum, moderately but distinctly enlarged distally; antennomere X 1.2 times and antennomere XI 1.8 times as long as wide.

Thorax: Pronotum 1.3 times as long as wide, distinctly narrower than head including eyes, nearly evenly rounded anteriorly, only moderately narrowing posteriorly and rather shallowly impressed postero-laterally in dorsal view (Fig. 5); entire dorsal outline of pronotum moderately convex in lateral view; pronotal disc with slight indication of median longitudinal impression/furrow in anterior half. Surface with dense microsculpture and thus less glossy, similarly as in head; bottom of postero-lateral impressions microsculptured (without coarse wrinkles) and adjacent basal area distinctly punctured; dorsal punctation similar to that on head, finer and sparser posteriorly near base. Setation as on head. Mesosternum simple. Metasternum with a pair of conspicuously projecting, apically setose protrusions postero-medially, near median margin of metacoxae.

Elytra: 1.7 times as long as wide, strongly convex, narrowed and subtruncate apically; humeri entirely obsolete; postscutellar impression absent. Surface smooth, glossy, distinctly punctured; punctation generally somewhat finer and sparser than on head, especially in apical third, at places somewhat denser (posterior setose band, see below). Setation similar to that on head, appressed, with scattered short and inconspicuous erect setae, mostly pale, some appressed setae whitish and thicker, forming two vague, transverse bands, situated in basal third and shortly behind midlength of elytra, some whitish setae scattered also laterally and near base. Metathoracic wings almost entirely reduced.

Legs: Penultimate tarsomeres rather narrow, terminal tarsomere subapical in metatarsi; mesotibiae modified, moderately curved inwards and strongly excavated on inner side subapically (Figs 75, 76); metatibiae moderately curved inwards apically and thus with inner apical margin slightly produced, with single apical spur. Setation

largely normally developed; mesotibiae with some longer setae on inner side, near/on margins of subapical excavation.

Abdomen: Sternum VII simple, slightly unevenly rounded posteriorly, its apical margin shortly, densely setose. Tergum VII evenly rounded posteriorly. Sternite VIII (Figs 77, 78); paired prongs rather simple, wide at base, strongly narrowed before midlength, curved ventrad, dorso-ventrally flattened and convergent in apical half, their apex rounded; each prong with a tuft of conspicuously long, stiff setae on ventral side, and with some short, stiff setae on/along apical margin. Tergite VIII simple, rounded posteriorly, with apical margin slightly emarginate medially.

Aedeagus (Fig. 79): Apical portion of tegmen 0.7 times as long as basal-piece, parallel-sided, trilobed apically, middle apical lobe wide basally, nearly evenly narrowing towards pointed apex, moderately longer than somewhat divergent lateral lobes.

FEMALE: Externally identical with male, except as follows: metatibiae simple, with two apical spurs; metasternum simple, lacking paired protrusions; middle legs simple, rather shortly setose; sternum VII with posterior margin quite evenly rounded.

VARIABILITY: Distinctly variable in prominence of surface microsculpture; some specimens from Struisbaai and all from Alexandria (Woody Cape) and Sedgefield with surface of head and pronotum at least partly rather smooth and glossy. Similarly, surface of elytra in some specimens uneven and somewhat less glossy.

DIFFERENTIAL DIAGNOSIS: *Anthelephila vanhillei* sp. n. differs from the most closely related and possibly sympatric species, *A. subtruncata*, by the pronotum rather shallowly impressed (less constricted) postero-laterally in dorsal view, by the conspicuously modified male mesotibiae, male sternum VII rounded posteriorly, and by the form and setation of the prongs of male sternite VIII (cf. Figs 72, 73 and 77, 78).

DISTRIBUTION: South Africa.

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